Handy Guide To
RR Meetings—p. 28

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February 8, 1960

RAILWAY AGE *weekly*

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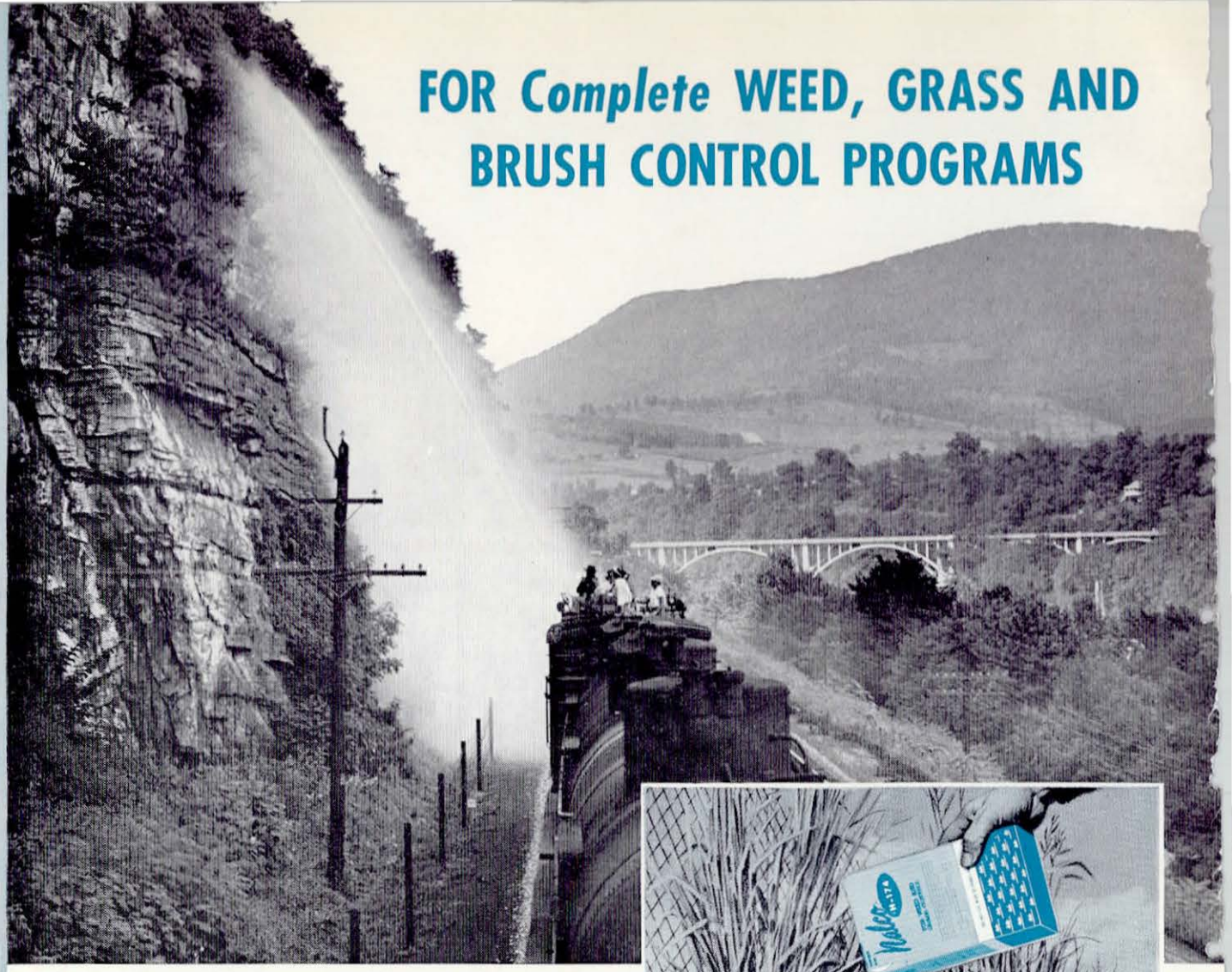

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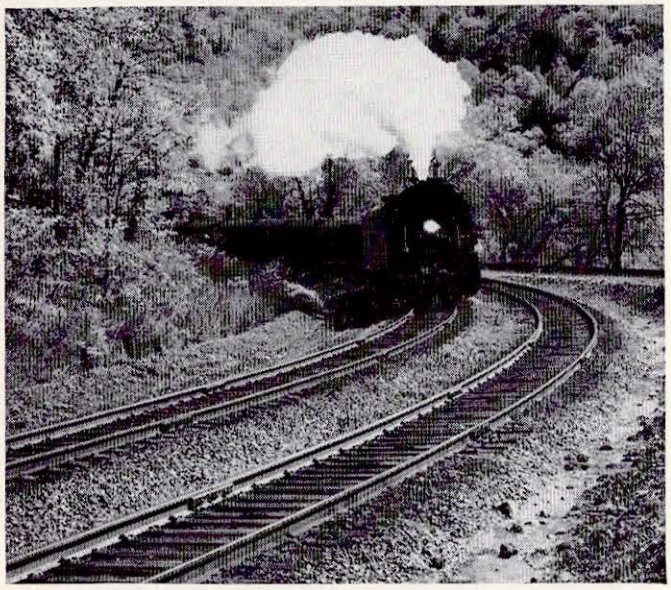
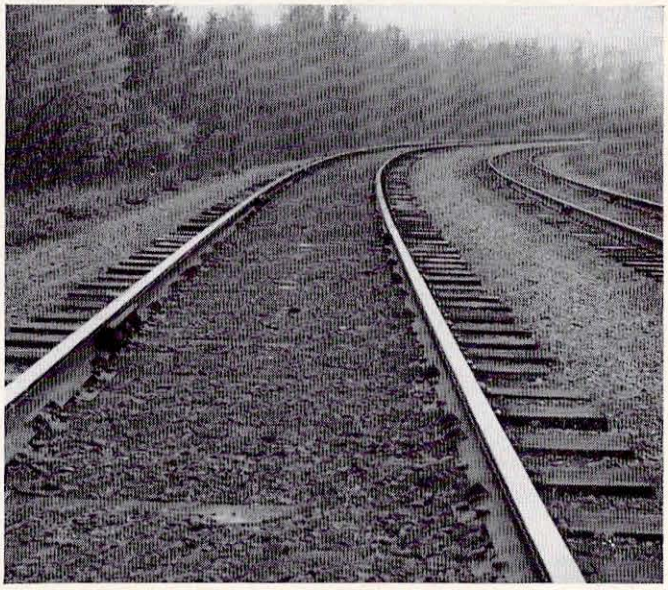
Comparative abrasion-resistance was tested by a large Eastern road on this 7-deg-51 min curve. Heat-treated rails on the high side showed less than half as much wear as the standard control-cooled rails after 7 years of heavy service.

Here is a difficult 8-deg-30 min curve winding through Pennsylvania's Pocono Mountains at a 1.6 pct grade. Untreated rails lasted barely five years, while heat-treated rails laid at the same time look good for several more years.



This 4-7-12 degree compound curve in the Pocahontas coal fields was laid over five years ago, with heat-treated rails. These heat-treated rails have outlasted standard CC rails by as much as 6½ times, and are still going strong!



In northern Minnesota, two 4-degree curves were selected for comparative testing of heat-treated and untreated rails. After nine years, heat-treated rails have already outperformed untreated rails by more than 2 to 1.

How these 4 roads saved with Bethlehem fully heat-treated rails

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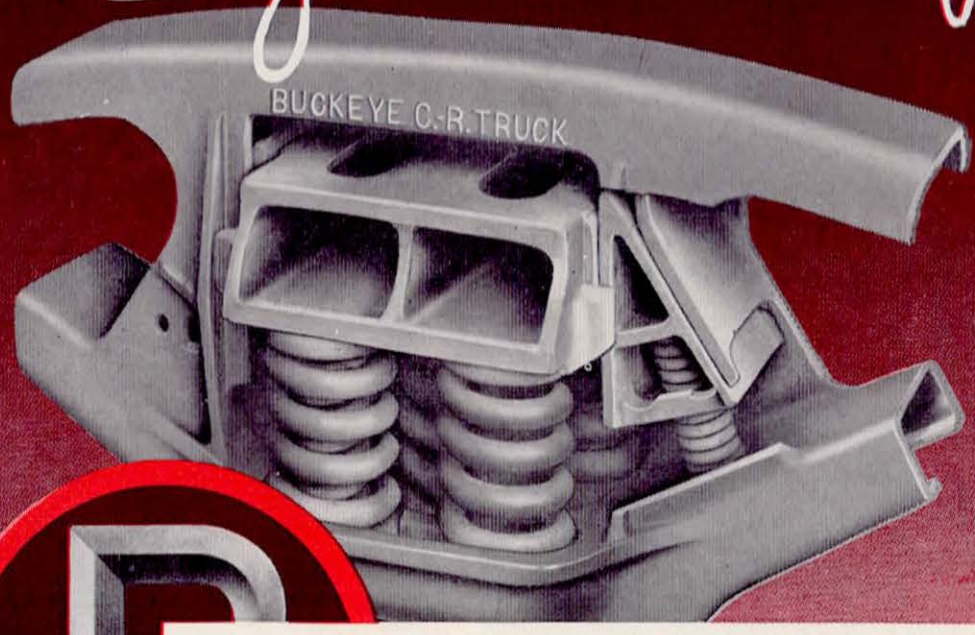

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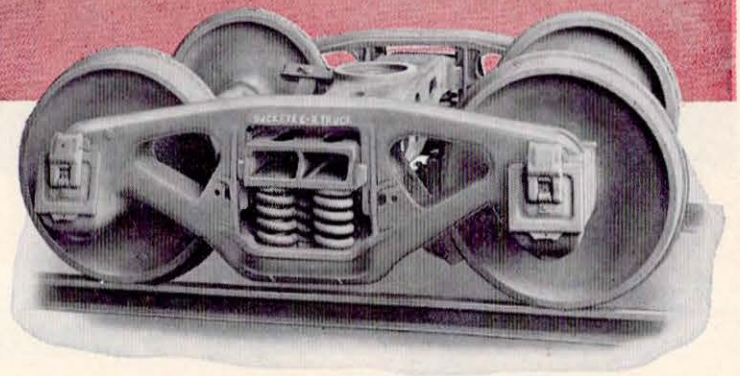

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Week at a Glance

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RRs, BLE accept arbitration ..... p. 9

A major rail strike is a lot less likely now that the carriers and Engineers have agreed to submit their wage dispute to binding arbitration. The result could be a "pattern" settlement involving other brotherhoods.

Cover Story—Mechanical reefers get the traffic p.14

The country's fleet of mechanically refrigerated railroad cars has more than quadrupled since 1955. These so-called RP cars carry a wide variety of commodities, frozen and non-frozen. Here, in the first part of a two-article series, is why mechanical reefers are in the limelight.

RRs press for diversification p.35

Eight railroad executives—including three presidents—made a strong pitch last week for the right to engage in other forms of transportation. They told a House subcommittee in Washington that current restrictions on transport diversification are short-changing the public.

The Action Page—Government transport research p.38

All technological advancement in railroading has come from research by railroads and their suppliers. A case in point is the railroads' progress in adoption of mechanical refrigeration as part of their constant and vigorous effort to improve service. Railroad competitors, though, get government handouts by the billions.

Short and Significant

Robert O. Boyd will continue . . .

as a member of the National Mediation Board, of which he is now chairman. The Senate has confirmed President Eisenhower's reappointment of Mr. Boyd for another three-year term ending Jan. 31, 1963. He has been a member of NMB since 1954.

First tri-level 85-ft flat car . . .

designed to carry new autos was scheduled to make its first move via Frisco over the past weekend. The car, built for Frisco by Pullman-Standard, was demonstrated to Chrysler Corp. officers last Thursday in St. Louis. Capable of handling 12 standard-size autos or 15 compact cars, it is equipped with a 10-in. travel cushion underframe and universal tie-down system—full-length channels to which cars may be anchored in transit. Each of the three decks has its own bridge plates, to permit loading-unloading operations in the

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Week at a Glance CONT.

Current Statistics

Operating revenues	
11 mos., 1959 ...	$8,980,340,079
11 mos., 1958 ...	8,727,008,232
Operating expenses	
11 mos., 1959 ...	7,050,236,098
11 mos., 1958 ...	6,888,226,710
Taxes	
11 mos., 1959 ...	958,748,814
11 mos., 1958 ...	876,893,397
Net railway operating income	
11 mos., 1959 ...	672,127,835
11 mos., 1958 ...	684,853,088
Net income estimated	
11 mos., 1959 ...	484,000,000
11 mos., 1958 ...	514,000,000
Average price railroad stocks	
Feb. 2, 1960 ...	102.63
Feb. 3, 1959 ...	108.14
Carloadings, revenue freight	
3 wks. '60	1,784,611
3 wks. '59	1,692,758
Freight cars on order	
Jan. 1, 1960	43,870
Jan. 1, 1959	27,596
Freight cars delivered	
12 mos., 1959 ...	37,819
12 mos., 1958 ...	42,760

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same manner as trailers are handled in piggyback service. During test runs, Frisco will use a special mobile tri-level loading ramp, built by company shops on an existing flat car. Santa Fe is also working (with Ford) on a tri-level 88-ft car. Prototype (53½ ft in length) went into service Jan. 20 (RA, Jan. 25, p. 7; Feb. 1, p. 12).

Another 500 mechanical refrigerator cars . . .

have been ordered by Santa Fe. Delivery of the cars, along with 200 ordered previously (RA, July 13, 1959, p. 41), will bring the road's ownership to more than triple the number of units (310) in service now (see page 15). G. E. Duffy, Santa Fe traffic vice president, said the new order will bring the company's investment in mechanical refrigerator cars to more than $30,000,000—including almost $15,000,000 for the new block of 500 50-ft, 70-ton cars.

Volume rates on coal . . .

as now published by eastern railroads will be approved by the ICC if the Commission adopts Examiner E. L. Boisseree's proposed report. The report came out of the Commission's investigation No. 32871 of the rates, which it did not suspend. The rates apply on bituminous coal, other than for cooking or metallurgical purposes, from Pennsylvania, West Virginia, Virginia and Kentucky to several Atlantic ports from Salem, Mass., to Baltimore, Md. While minimum-volume requirements vary, the tariffs in issue are generally like those applicable on shipments to the New York harbor area. These provide that industries receiving at least 5,500,000 tons of coal a year will get a rate cut on all coal in excess of 3,000,000 tons.

Imagination and hard work . . .

have started paying off for Missouri Pacific's passenger traffic department. Passenger revenues in 1959 increased 4% over '58 figures—first time since 1951 that year-end results showed anything but a downward trend. And passenger train revenue per train-mile climbed to a 10-year high.

Bootleg trucking . . .

is seriously undermining the financial structure of the regulated transportation system, says W. M. Buttram, president of the National Conference of State Transportation Specialists and director of the Arkansas Commerce Commission. "Wildcatters ignore identification and insurance requirements and steal jobs with cut-throat rates," according to Mr. Buttram. The executive committee of the national conference is preparing a program calling for interstate cooperation on enforcement problems as well as uniformity and simplification of regulations.

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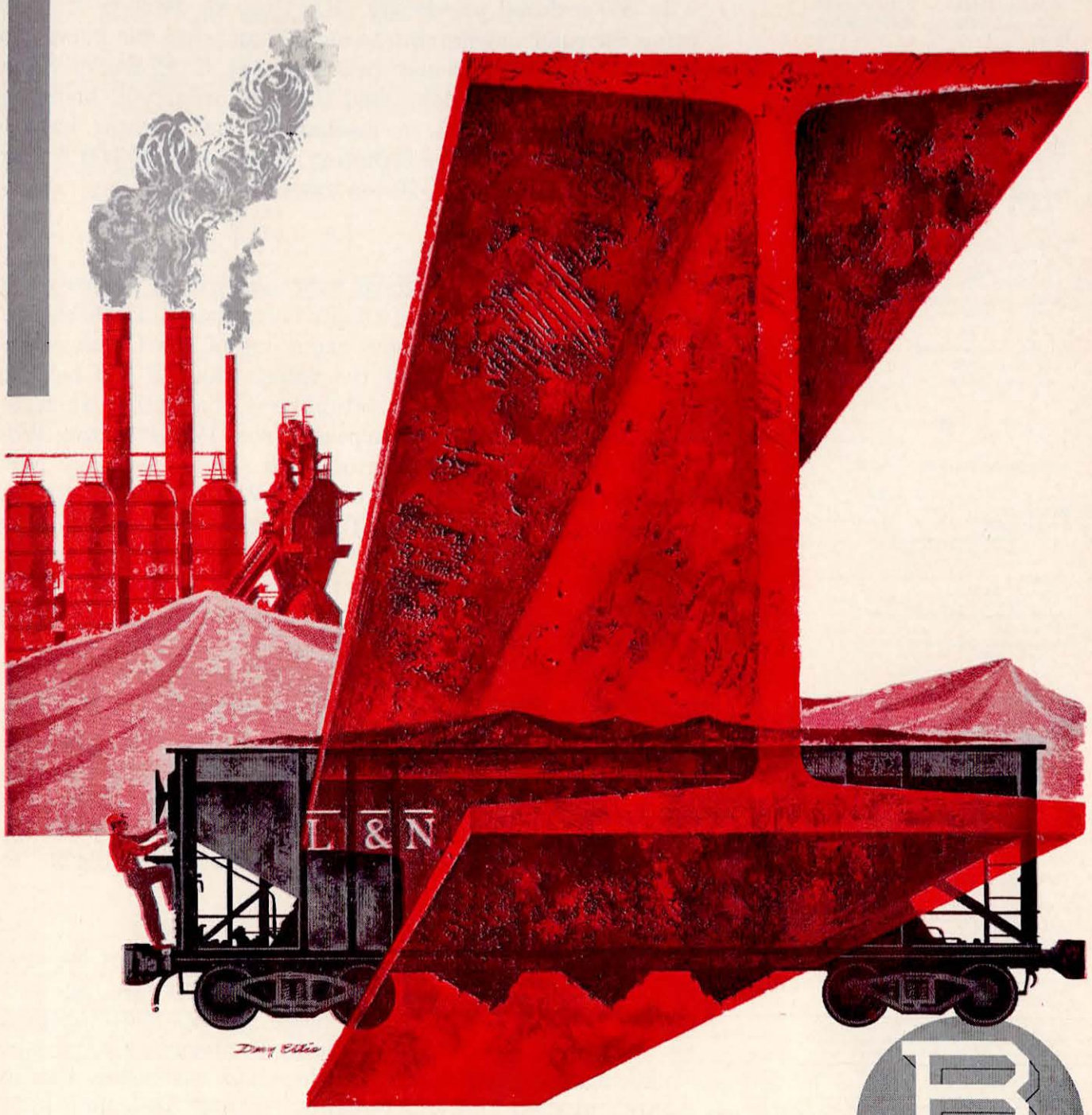

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BRENCO BEARINGS

RRs, BLE Accept Arbitration

► The Story at a Glance: Threat of a rail strike faded measurably last week as the railroads and the Brotherhood of Locomotive Engineers agreed to submit their wage dispute to binding arbitration.

Immediate effect of the move will be cancellation of a strike ballot which the BLE planned to spread.

Until it accepted the National Mediation Board's proffer of arbitration, the union—along with two other brotherhoods—had been poised to throw the dispute into "emergency" status.

For the first time since 1954-55, the carriers and a union will submit a national issue to the "final and conclusive" decision of a board of arbitration. Acceptance of arbitration—made by the railroads Wednesday and by the BLE Thursday—put the brakes on a dispute that had been rocketing toward possible strike action and emergency board consideration.

Arbitration of the Engineers' wage case will have no direct effect on pending disputes with the other four operating unions and the non-ops. But "pattern" settlements have become traditional in the industry and an arbitration award in the BLE case could exert some influence on the outcome of similar disputes with the other brotherhoods.

Both management and union hailed the arbitration move. Theodore Short, spokesman for the three regional carriers conference committees, called the proffer "a reasonable and practical method" for disposing of the case. He commented that the railroads, "in a good faith endeavor to settle this dispute before it reaches emergency proportions, have reached the conclusion that this can best be accomplished if the parties agree to submit the issues . . . to arbitration."

BLE Grand Chief Guy L. Brown said the union is "quite confident we can present a good case to an arbitration board. . . . We can't see an arbitration board failing to award us a reasonable amount of money this time." (Last venture into arbitration by the union came in 1954, when a board rejected a BLE demand for a percentage increase to restore a so-called skilled differential.)

Under arbitration procedure, the issues are clearly defined and the board may not go beyond the stated issues. In the BLE case, it's expected that the questions will be:

- The Engineers' demand for a 12% wage increase.
- The carriers' counter-demand for a 15-cent-per-hour pay cut.
- Opposing demands involving the cost-of-living escalator, which the BLE wants retained and the carriers want dropped.

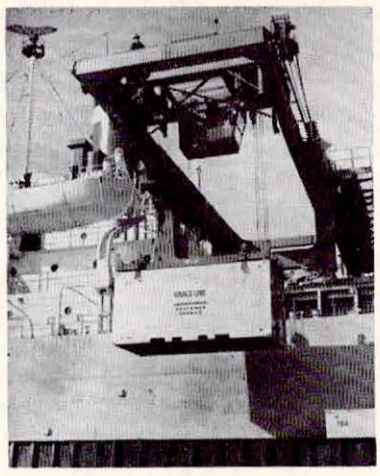
The BLE is requesting formation of a six-man board—two members chosen by the union, two by the carriers and two neutrals picked by the other four members of the board (or by the NMB if union and carrier representatives can't agree).

Although the BLE accepted arbitration, there was little indication that the other operating brotherhoods will take the same course. SUNA was spreading a strike ballot last week, although token negotiations were still under way. President Neil P. Speirs indicated that talks may be broken off this week unless new developments crop up. SUNA's strike ballot, he estimated, will be returned by the end of this month.

Mediation attempts involving the ORC&B were in recess, while the organization's board of directors met in Cedar Rapids, Iowa. President John A. Paddock indicated that union conferees will return to Chicago this week for talks which may well wind up ORC&B mediation proceedings and bring an expected proffer of arbitration.

BLE arbitration and breakdown of other wage talks held the spotlight last week, but there were also these labor developments:

- BRT delegates, toiling toward the windup of a lengthy convention in Cleveland, rejected a BLF&E bid for amalgamation. A Trainmen's committee studied the proposition and said, in effect, that if amalgamation is to come, it should first involve train service unions—the BRT, the ORC&B and the SUNA.
- W. P. Kennedy won re-election as BRT president, by a 641-to-464 vote over W. J. Weil, general secretary and treasurer. Mr. Weil also lost in a bid for election as assistant to the president in a run-off election against Charles Luna, a BRT vice president and a surprise candidate. The incumbent assistant, V. W. Satterwhite, was eliminated on the first ballot and Mr. Luna defeated Mr. Weil, 602 to 494, in the runoff. The 67-year-old Kennedy will serve as president until 1960, when he must step down in line with a sliding scale for retirements adopted by the BRT. Mr. Luna will succeed to the top job under a presidential succession plan also adopted by convention delegates.
- Wage talks with the non-ops in Canada were broken off and the unions called for appointment of a conciliation board empowered to investigate the dispute and make recommendations for settlement. The non-ops are demanding a 25-cent-per-hour increase—same demand as the union group has served in the U.S.



Automatic Transfer

Container transfer between flat car or truck and steamship is now a fully automatic operation as far as the Grace Line's "Santa Eliana" is concerned. Three of National Malleable & Steel Castings Co.'s "Speedloaders" have been installed on the ship, which was converted recently to carry 476 "Seatainers" between New York and Venezuela. These containers are 17 ft by 8 ft by 8 ft and hold 40,000 lb, but "Speedloaders" can be built to handle units of any size.

RR Electrification Held 'Inevitable'

Twelve factors that point to increasing railroad electrification were cited at last week's winter general meeting of the American Institute of Electrical Engineers in New York.

L. B. Curtis, a Pennsylvania assistant engineer, was the author of a paper entitled, "Economic Trends Make Railroad Electrification Inevitable." He said the following factors "point to the ultimate reduction in cost of electrification facilities and reduction in the cost of operation of railroads with electrification":

- A high electric load factor.
- Reduced electric locomotive maintenance.
- Favorable cost of electrical energy compared with oil.
- Power distribution at commercial frequency.
- Standardization of systems of electrification.
- Conversion of diesel-electrics to electric locomotives.
- Higher speeds.
- Joint use of right-of-way with utility companies.
- Increased sale of air rights.
- Use of atomic power to generate energy.
- Shortage of oil in national emergencies.
- Competition by foreign manufacturers.

Mr. Curtis said he was convinced that "these factors will not only produce a form of motive power that is more economical to operate and maintain than the present diesel-electric system, but will reduce first costs of electrification to a point where they are equal to or below the cost of the additional diesel-electric power required to give equivalent electric service."

Highlights of other papers presented at the AIEE meeting:

- Simulated train operation has been performed by an IBM 650 computer. Three General Railway Signal Co. engineers said the computer program handles up to 10 trains at a time over a 100-150 mile section of single track railroad with passing sidings. (RA, Oct. 19, 1959, p. 31.)
- Special purpose data processing equipment is automatically providing traffic office sorts of wheel reports on the Rock Island. A Stromberg-Carlson Co. engineer said the electronic and semi-conductor techniques employed in this equipment has many applications in other data processing problems. The equipment on the Rock Island provides men in 65 traffic offices with reports on over 9,000 cars daily. (RA, Feb. 18, 1957, p. 24.)
- Pole line mileage will probably be reduced as a result of the microwave installation recently started on the Union Pacific, according to a UP communications officer. Presently under construction is a microwave system from Omaha, Neb., to Laramie, Wyo., and plans are now being progressed to extend the system to Salt Lake City. (RA, Jan. 25, p. 39; May 18, 1959, p. 41.)

Watching Washington *with Walter Taft*

- **THEM'S KIND WORDS,** but it's time for action is about what the AAR board of directors said in their comment on President Eisenhower's railroad statement (RA, Feb. 1, p. 10). The President's statement included an expression of his view that there should be "a real overhaul" of all the "antiquated rules and regulations" which govern the railroads.

THE AAR DIRECTORS, meeting in Washington three days later, said the President's statement was welcomed by the railroad industry. They added that the industry "can now hope the administration and Congress will begin to take appropriate action to clear the way for better transportation service to the public."

GOVERNMENT POLICY of "favoritism toward none and fair treatment toward all" is transportation's basic need, the board also advised. It warned that "explosive national growth and intensified security problems" demand maximum development of railroads—for only railroads can handle "the rising torrents of goods America must produce for our ever-growing population."

SPECIFIC ACTION recommended by the rail executives would involve enactment of top-priority proposals in the industry's legislative program. It would revise tax laws to stimulate capital expenditures and remove inequities. It would impose adequate charges for use of publicly-provided transport facilities. It would remove restrictions on railroad operations of other forms of transport. And it would repeal the Motor Carrier Act's agricultural exemptions—or provide rail transportation of agricultural products with like freedom from regulation.

- **COMMUTER-AID PROGRAM** of the American Municipal Association (RA, Dec. 7, 1959, p. 9) remains in the railroad industry as an eastern-road program only. The AAR board of directors has decided that the association should not participate.

NO BOARD STATEMENT was issued, but Chairman J. M. Symes of the Pennsylvania explained that the decision was based on the fact that western and southern roads are not confronted with the commuter problem that exists in the East. The eastern lines will cooperate with AMA, Mr. Symes said. He also reported that southern and western roads are giving the matter further consideration.

FOUR CONGRESSIONAL STEPS are proposed by the AMA program. They would establish a national policy with respect to commutation services, give tax relief to commuter railroads, provide for federal loans to municipalities for improved commuter facilities, and launch a study of the idea of making federal grants-in-aid to communities with commuter problems.

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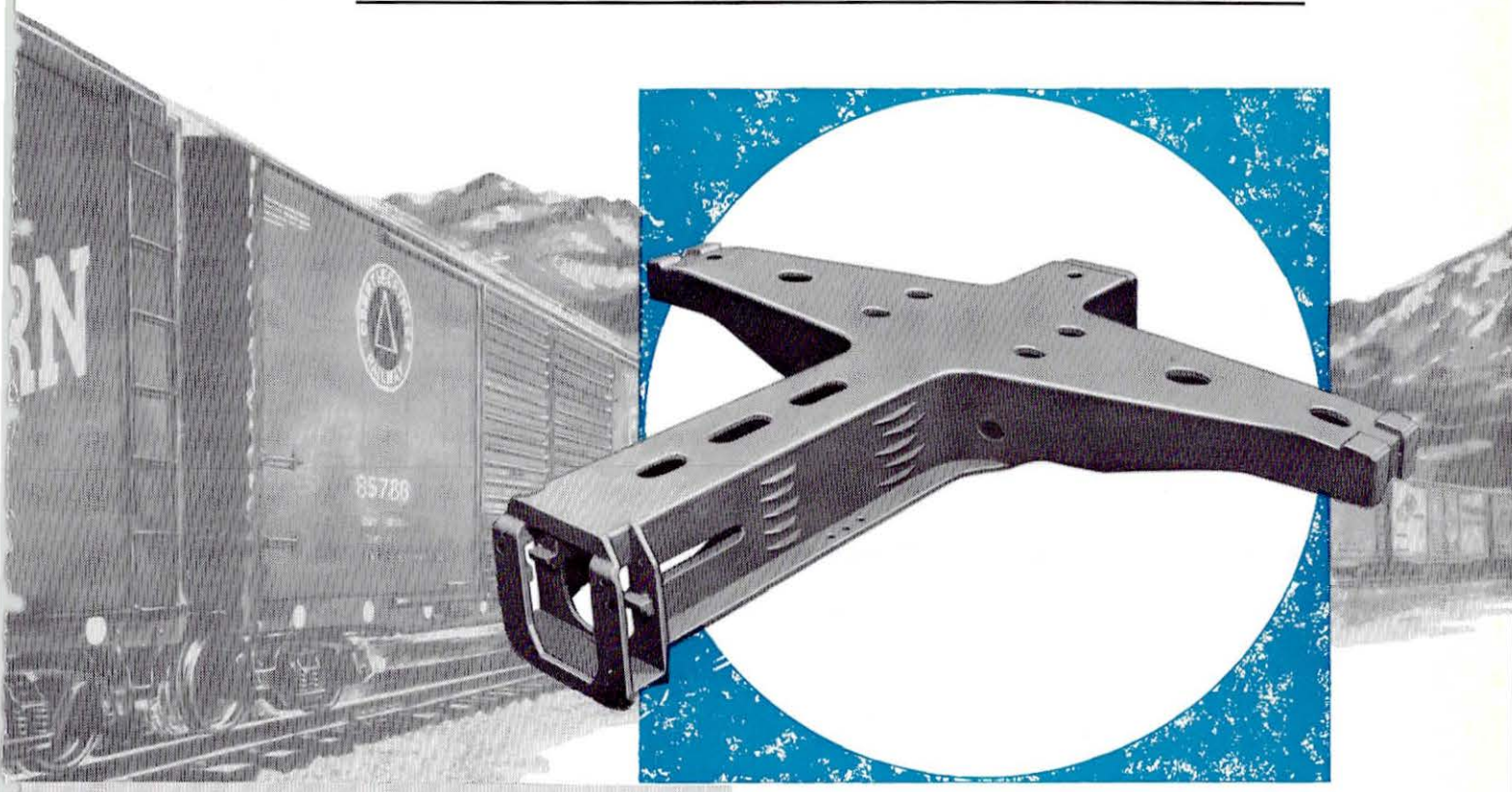

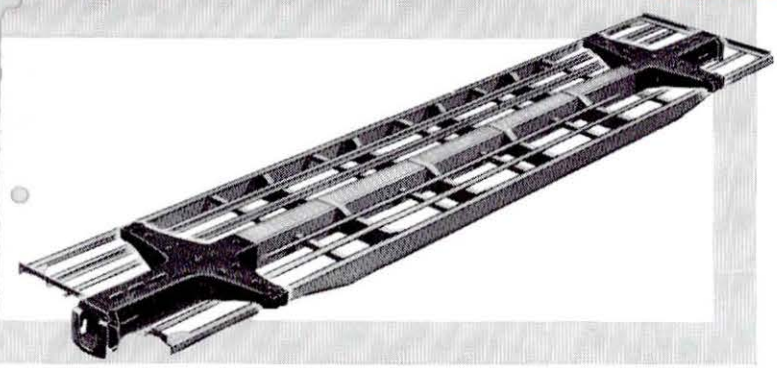

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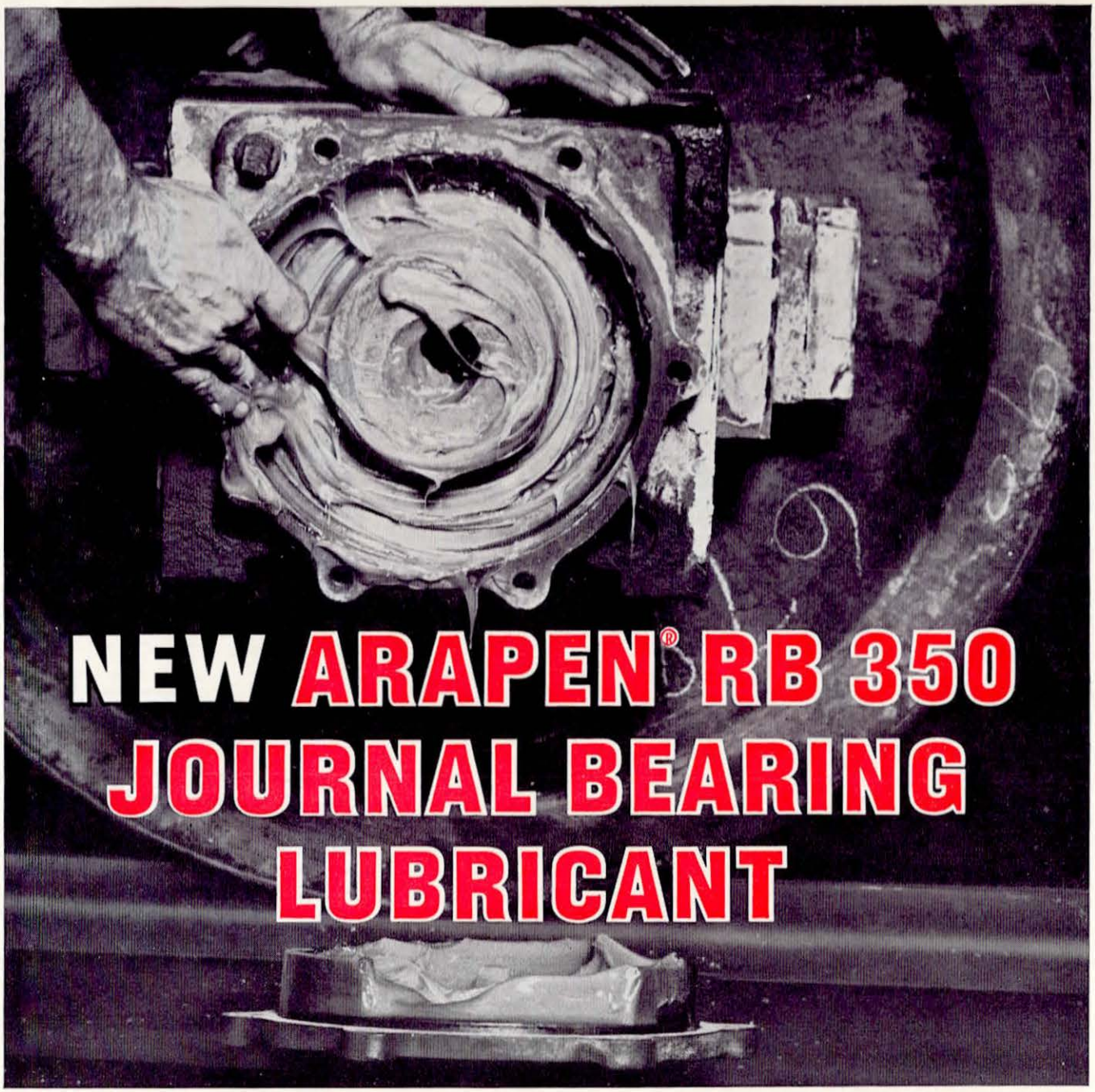

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People in the News

DELAWARE & HUDSON.—J. F. Riley, comptroller, New York, elected vice president—assistant to president. **John H. O'Neill,** assistant comptroller, Lackawanna, named comptroller, D&H, effective Feb. 15.

DULUTH, MISSABE & IRON RANGE.—Walter L. Stein appointed assistant secretary, Duluth, Minn.

ERIE.—Edwin J. Robisch, superintendent, Kent division, Marion, Ohio, transferred to the Mahoning division, Youngstown, Ohio, succeeding **Francis J. Mulligan,** retired. **James D. McFadden,** superintendent, Buffalo and Rochester divisions, Buffalo, succeeds Mr. Robisch.

Edward A. Alexander, division storekeeper, Susquehanna, Pa., transferred to Marion, Ohio, succeeding **C. A. Lefferts,** retired. **Lincoln W. Pratt** of the stores department, Meadville, Pa., car repair shop, succeeds Mr. Alexander.

James T. Flynn, assistant division engineer, Kent division, Marion, Ohio, promoted to division engineer, Buffalo and Rochester divisions, Buffalo, N.Y., succeeding **Walton E. Smith,** transferred to the Allegany-Bradford-Meadville and Buffalo & Southwestern divisions, Salamanca, N.Y. Mr. Smith succeeds **Louis Rossman,** retired because of his health. Mr. Flynn's former position abolished.

FLORIDA EAST COAST.—W. L. Thornton appointed chief operating officer, St. Augustine, Fla. Mr. Thornton was formerly superintendent of the **Alabama Great Southern** at Birmingham, Ala.

W. A. Baker named chief mechanical officer of the FEC. Mr. Baker was formerly assistant chief mechanical officer of the New Haven.

T. C. Maurer appointed chief freight traffic officer of the FEC, succeeding **D. B. Green,** retired. Mr. Maurer was formerly general traffic manager of the Owens Illinois Glass Co. at Toledo, Ohio.

FORT WORTH & DENVER.—W. N. Verner, general agent, Lubbock, Tex., appointed assistant general freight agent, Fort Worth, Tex., succeeding **J. F. Lehane, Jr.,** retired. **W. M. Mullen,** traveling freight and passenger agent, Houston, Tex., appointed general agent, Lubbock, and is succeeded by **W. D. Hughart.**

MONON.—Pat T. di Lustro, general agent, Washington, D.C., promoted to assistant general freight agent, Louisville, Ky., to succeed **Fred E. Cannon,** retired. **Horace L. Harlan,** general agent, Hammond, Ind., succeeds Mr. di Lustro, and in turn is replaced by **Leonard L. Crawford. Ronald P. Fisher** named freight traffic agent, Chicago.

NEW HAVEN.—Hollis H. Coyle appointed comptroller, **William A. Scheibler,** general superintendent, and **Leslie H. Tyler,** vice president—public relations (RA, Feb. 1, p. 32).

NEW YORK CENTRAL.—Val G. Rice, assistant to director of public relations, **Association of Western Railways,** Chicago, appointed to the new post of public relations editor for the NYC at New York.

NORFOLK & WESTERN.—William A. Lashley, general manager of the Reynolds Metals Co. public relations staff, will become director of public relations and advertising for the N&W at Roanoke on March 1.

Raymond C. Gardner, commercial agent, Wilmington, N.C., promoted to general agent, Chattanooga, Tenn.

NORTHERN PACIFIC.—R. E. Nichols, office engineer, St. Paul, Minn., appointed principal assistant engineer there, succeeding **J. D. Worthing,** resigned. **R. G. Brohaugh,** assistant district engineer, St. Paul, named to succeed Mr. Nichols, and in turn is replaced by **H. E. Moore,** assistant engineer of track. **C. E. Akidakis,** assistant engineer in the district engineer's office, St. Paul, and **A. W. Hegland,** transitman, Missoula, Mont., named assistant engineers of track, St. Paul.

OREGON PACIFIC & EASTERN.—A. L. Stanley, general freight agent and auditor, Cottage Grove, Ore., appointed superintendent auditor.

PENNSYLVANIA.—John A. Mason, Jr., manager of public relations, Southwestern region, PRR, has resigned to become a foreign service officer with the U.S. Information Agency.

READING.—Beeber Gross, real estate agent, Philadelphia, named director of purchases and real estate, a new position. **George E. Wilson,** general purchasing agent, retired Feb. 1.

John C. McGinn, assistant to auditor of disbursements—research, has been named manager of the newly created Department of Rate Cost Studies and Statistics, which is part of the comptroller's department.

WESTERN PACIFIC.—Walter C. Brunberg, director of purchases and stores, San Francisco, appointed assistant vice president-administration, Marketing division there.

Kenneth A. Rank, assistant to vice president-marketing, San Francisco, advanced to assistant sales manager, eastern region, New York.

OBITUARY

Hubert M. Croghan, 53, vice president—traffic, **Central of Georgia,** Savannah, Ga., died Jan. 26, following a heart attack aboard a train bound for Pittsburgh, Pa.

Homer Hall, 88, former general attorney, **Wabash,** died Jan. 25.

LeRoy Relyea, 75, retired supervisor, New York Terminal district, marine department and river division, **New York Central System,** died Jan. 31 in Hackensack (N.J.) Hospital.

Harry A. Wheeler, 93, former president of the **Railway Business Association** (predecessor of Railway Progress Institute) died recently in Altadena, Cal.

E. L. Schroeder, 42, western editor, **Traffic World,** died Jan. 31 in Community Hospital, Geneva, Ill. He was chairman of the Publications Committee, Associated Traffic Clubs of America.

Supply Trade

Alfred B. Miller, staff engineer, has been appointed senior consulting engineer in the Railway Equipment Engineering Department,

J. F. Riley
D&H

Leslie H. Tyler
New Haven

Hollis H. Coyle
New Haven

Wm. A. Scheibler
New Haven

William A. Lashley
N&W

Beeber Gross
Reading

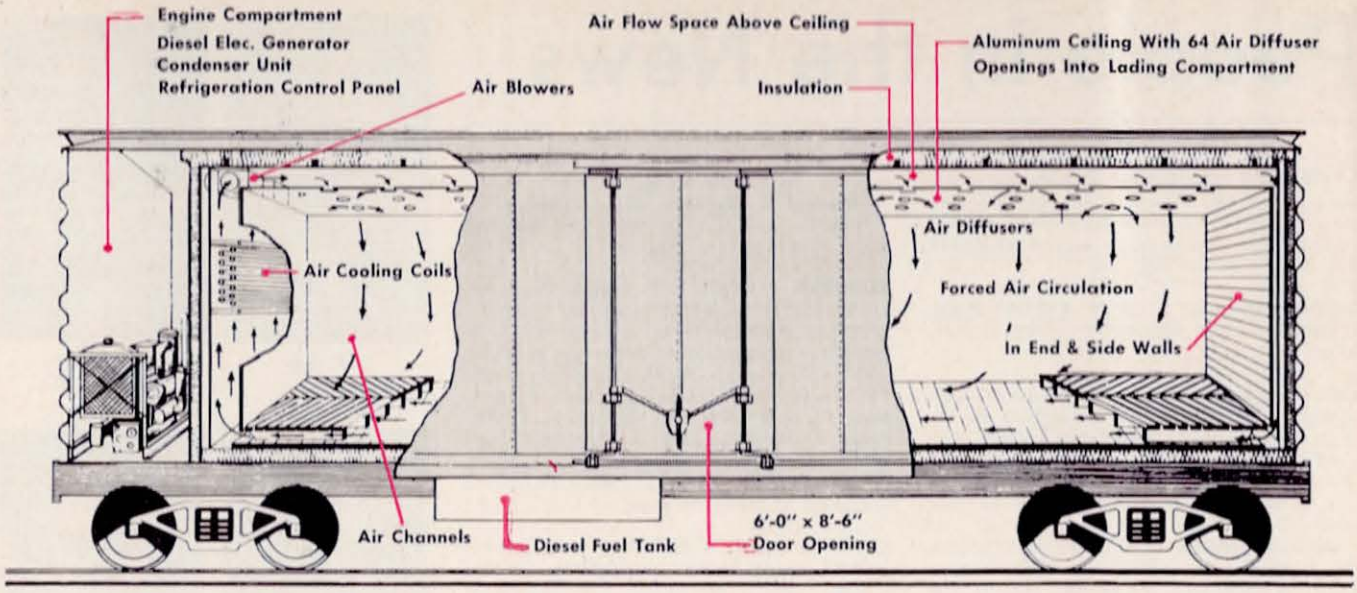
Union Switch & Signal-Division of Westinghouse Air Brake Co., Swissvale, Pa. **Willard A. Wood,** consulting engineer, appointed section engineer, Classification Yard Section, Railway Project Engineering Department, replacing **H. P. Clapp,** resigned.

Dr. Marshall G. Holloway has been elected a vice president of the **Budd Company** at Philadelphia and will assume direction of research programs on a companywide basis. Mr. Holloway was formerly president, Nuclear Products—Erco Division, ACF Industries, Inc., Washington, D. C.

F. S. Armstrong, assistant comptroller of **Pullman Incorporated,** has been elected comptroller. **Donald H. Larmee,** manager of the tax department, has been appointed assistant vice president—taxes.

Kenneth P. Smith, comptroller of **Standard Railway Equipment Manufacturing Co.,** has been elected vice president—finance.

Transport Leasing Company, a subsidiary of Pullman, Inc., has established new headquarters for the service leasing of special types of railroad cars on the sixth floor of 200 South Michigan Avenue, Chicago 4, Ill.



ENVELOPE-TYPE mechanical refrigerator car with air circulation through perishable loads.

Mechanical Reefers Get Traffic

The mechanical refrigerator car fleet on U. S. railroads has more than quadrupled since 1955. Reports to Railway Age from owners and operators show 5,161 such RP cars now in service or on order, compared with an estimated 1,200 in 1955.

Present cars are handling a wide range of commodities, although most of the early units were aimed at the frozen food business. In fact, it was generally believed four years ago that 5,000 mechanical reefers were needed to handle frozen food traffic. The goal has been reached in relatively short time.

Non-Frozen Traffic Expands

This rapid fleet expansion has made it possible for railroads and car lines to provide RP cars for non-frozen commodities, also. (A list of important commodities, frozen and non-frozen, accompanies this article). And as cars in service have increased in number, load and mileage figures have become impressive. For example:

- Fruit Growers Express and its two associates, Burlington Refrigerator Express and Western Fruit Express, moved 82,982 loads in mechanical reefers up to December 31, 1959.
- The three lines have accumulated 151,400,143 loaded car-miles and 92,571,982 empty car-miles through the end of 1959. Shipments have included 42 frozen foods and 35 non-frozen commodities.

Fresh fruit and vegetable traffic has been a point of concentration, apart from frozen foods. Five years ago there was doubt that the higher-cost mechanical car could be justified for this service. Today, both shippers and buyers of perishables are clamoring for all the mechanical refrigerator cars they can get. Back of the shift in opinion are two economic facts: Shippers have found that mechanical cars put fresh fruit and vegetables on destination markets in top condition. And cars of greater capacity are more adaptable for incentive loads, thereby reducing per-package transportation cost.

Pacific Fruit Express, operating the largest fleet of mechanical refrigerator cars (1,714 in service, 1,025 on order), says: "Indications are that PFE will build no more ice bunker cars because of shipper demand for mechanical cars to handle both frozen and perishable food products. The trend is equally strong towards 50-ft instead of 40-ft cars. Heavier loading, stimulated by incentive rates, effects economies for railroads as well as shippers. It helps justify the large expenditures for mechanical cooling equipment."

PFE reports the cars serve primarily to move frozen foods. But a large number carry heavy incentive loads of fresh vegetables, fruit, wine, nursery stock, in fact, almost any perishable product. These PFE incentive shipments move under considerably higher minimum loading and at substantially lower rates per 100 lb. These incentive rates often reduce the cost 25 cents per carton, which can make the difference between profit and loss in marketing the product.

RP Cars Boost Shipments

The Santa Fe reports that fresh fruit and vegetable shipments have increased greatly during the past year. This road, with a medium-size fleet (310 in service, plans for 200 additional this year, and 500 more recommended), is presently handling about 400 mechanical shipments per month. In November 1959, the Santa Fe originated 403 loads, of which 223 were frozen foods, 180 were non-frozen commodities.

Among the shipments from California and Arizona were such non-frozen items as lettuce, asparagus, celery, tomatoes, figs, grapes and oranges. The Santa Fe reports that availability of RP cars for tomatoes made it possible for the road to recapture some of the traffic from trucks; also, that, with the 50-ft 70-ton car, the shipper has an opportunity to take advantage of lower rates with a higher minimum load.

As for tomatoes, it has been reported that shipments made in RP cars are of

premium quality upon arrival at destination. Shipped green at origin, the tomatoes, under accurate temperature control in transit, are in peak market condition when delivered.

Not all shippers demand mechanical refrigerator cars. At present, 40-ft ice bunker cars with heaters and fans are preferred by banana shippers. These cars are adequate to carry the normal banana lot of around 21,000 lb; they are equipped to furnish the refrigeration, heat and ventilation needed to move this sensitive fruit at the required temperature of 56 deg. Furthermore, the 40-ft cars meet the door spacing requirements of both shipping and receiving platforms. Frankly, shippers see no reason to pay for the additional cost of unneeded mechanical equipment. However, no claim is made that RP cars cannot be designed and built to meet demands of banana traffic.

Cars Give Accurate Control

It is not surprising that RP cars with their inherent close temperature control are popular with fruit and vegetable shippers. There is a direct relation of temperature to the processes of change which take place in vegetable and meat products, fresh or frozen. Requirements differ widely among these products, but the range of temperatures within which each should be held in transit has been established. As an example, on the Santa Fe temperatures requested for tomatoes are 50-55 deg, lettuce 35 deg, grapes 37 deg, and oranges, 40 deg F.

The list of non-frozen commodities carried in RP cars include a surprising number of commodities other than food. Here again, the accurate temperature control in these cars has attracted temperature-sensitive products such as film, chemicals, and blood plasma.

One interesting case of the potential value of RP cars for non-food products involves shipment of nylon thread on giant spools for commercial looms. This thread has to be temperature-conditioned before use. By moving it in mechanical cars the spools can be delivered directly to the looms without need for intermediate conditioning.

Mechanical Cars Lower Costs

What about the future of mechanical refrigerator cars? Five years ago there was concern among fresh fruit and vegetable shippers because of the higher first cost of the cars. They feared that this added investment might lead to increased rates. But these fears have disappeared as the big mechanical reefers produce savings in transportation.

The situation is not one in which there is any question about the relative merits of mechanical versus ice refrigerated cars. The mechanical car is superior on practically every count. Constant research and development in better equipment is widening the gap.

Initial cost is the important unfavorable factor that will influence the rate at which mechanical cars will displace ice cars. An ice refrigerator car costs about $14,000, a mechanical car in the $25,000 to $30,000 range, depending on the design and accessories. With an average first-cost differential of about 100% the mechanical car must earn a correspondingly greater amount to show the same return on investment. However, attempts are being made to reduce this differential.

Offsetting the initial investment disadvantage are such factors as the mechanical car's ability to hold and recapture traffic and its adaptability to handle merchandise and clean freight in other-

(*Continued on page 17*)

Mechanical Refrigerator Cars in Service

OWNER OR OPERATOR CARRIERS	NUMBER	NOMINAL LENGTH (ft.)	TEMPERATURE RANGE
Boston & Maine	11	40	
Milwaukee[1]	50	50	All-Purpose
Northern Pacific[2]	150	50	All-Purpose
	26	40	All-Purpose
	50	50	
Rock Island[3]	21	50	All-Purpose
Santa Fe	256	50	All-Purpose
	54	50	—10°
West India Fruit & SS Co.	1	40	
CAR LINES AND SHIPPERS			
American Ref. Transit Co.	75	50	All-Purpose
	5	40	
Fruit Growers Exp. (incl. Western Fruit Exp. and Burlington Ref. Exp.)	1,058	50	All-Purpose
	63[a]	40	All-Purpose
	97	50	Zero
	51	40	Zero
	2[a]	40	Fresh
Merchants Despatch Trans. Corp.	51	50	All-Purpose
North Western Ref. Line[3]	14	50	All-Purpose
	1	40	Zero
Pacific Fruit Exp.	502	50	All-Purpose
	710[b]	50	Zero
	477	40	All-Purpose
	25	40	Fresh
John Morrell & Co.[3]	40[c]	40	All-Purpose
Swift & Co.[1]	6[c]	40	Fresh
	3,796		

Mechanical Refrigerator Cars on Order

PURCHASER	NUMBER	NOMINAL LENGTH (ft.)	TEMPERATURE RANGE
American Ref. Transit Co.	50	50	
Northern Pacific	100	50	
Pacific Fruit Exp.	1,000	50	Zero—70°
	25	50	32°—70°
Santa Fe	200	50	All-Purpose
	1,375		

[a]Includes one RPM car.
[b]Includes 15 RPM cars.
[c]RPM cars.

[1]Union Ref. Transit Lines, div. of General American Trans. Corp.
[2]Merchants Despatch Trans. Corp.
[3]North American Car Corp.

PROGRESS REPORT

SPENO

Here are the up-to-date facts on the SPENO Ballast Cleaning and the SPENO Rail Grinding Services.

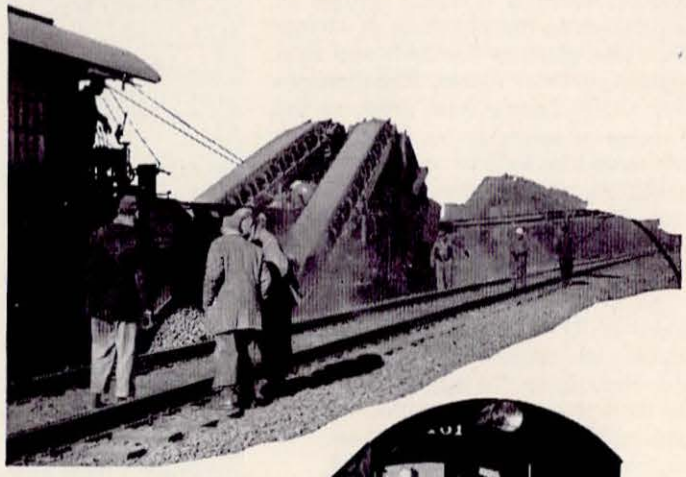
BALLAST CLEANING

SPENO Engineering and Research has developed a superior screening arrangement so that we are now using an improved Ballast Cleaner with greater efficiency.

RAIL GRINDING

Our Rail Grinding Service has been so well received we are now building a *THIRD* Rail Grinding Train to take care of the increased demand.

SPENO is constantly developing means for better service to make sure that the Railroads receive everything they pay for — and more



Just Ask the Railroads That have used us!

GEARED TO PROGRESS
P R I
MEMBER

FRANK SPENO RAILROAD BALLAST CLEANING CO., INC.

Clark Street
East Syracuse, N. Y.

306 North Cayuga St.
Ithaca, N. Y.

wise empty return movements.

Many have no doubt heard that mechanical refrigerator cars will replace ice cars in the same way the mechanical refrigerator replaced the home ice box. The transition may be at a relatively slow rate at first, but economics will accelerate the changeover as the mechanical fleet grows. The situation is analogous to the recent motive power revolution that replaced the steam locomotive with the versatile diesel. As the diesel fleet grew it was economically imperative to become 100% dieselized to get the potential savings in the elimination of enginehouse, coal, water and ash-handling facilities.

Ice Supply Is Factor

In the case of the home ice box, the owner of such equipment was faced with an ice supply problem as mechanical refrigerators increased. The same ice supply situation can play an important part in the switch to mechanical refrigerator cars. Even now there are locations where only one producer can supply the icing stations.

Also under consideration in this transition period is the possibility of conversion to mechanical refrigerator cars of existing ice bunker cars that have sufficient remaining service life. The PFE and several manufacturers have this project in the development stage. Mechanical cooling would be supplied by either diesel-driven equipment located in one ice bunker, or by undercar equipment. The latter would make both ice bunkers available for appreciably larger cargo capacity.

The 5,100 RP cars in service and on order represent about 4½% of the 116,000-car refrigerator fleet. It is probable that at least 25,000 RP cars will be in service by 1970. When this total is reached, economic pressures will probably force a complete conversion to mechanical cars by 1980.

Starting in 1948 Fruit Growers Express and its associates made the first comprehensive investigation of mechanical refrigeration. Since that time they have built 1,271 cars, all of the all-purpose type except the first 150, which were zero cars.

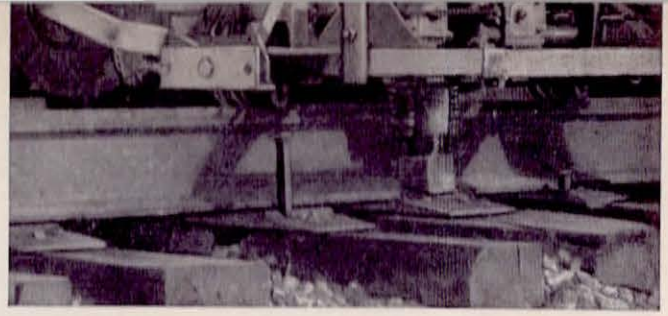
This company and its associates were pioneers in the mechanical refrigerator car field. It recognized early that successful operation of the RP cars required men trained to service and maintain them. FGE established a training program with two branches. One was to

(*Continued on page 19*)

SANTA FE's mechanical refrigerator cars are ideally suited for shipment of frozen juice concentrates from West Coast plants to eastern markets. Mechanized loader shown here is handling packaged concentrates at Fullerton, Calif.

MANY PFE mechanical refrigerator cars carry incentive loads of fresh fruit and vegetables. Here frozen cauliflower is being loaded.

FRESH CAULIFLOWER is loaded into a PFE mechanical reefer in California. Pacific Fruit Express also moves fruit, wine and other perishables in these cars with accurate temperature control.



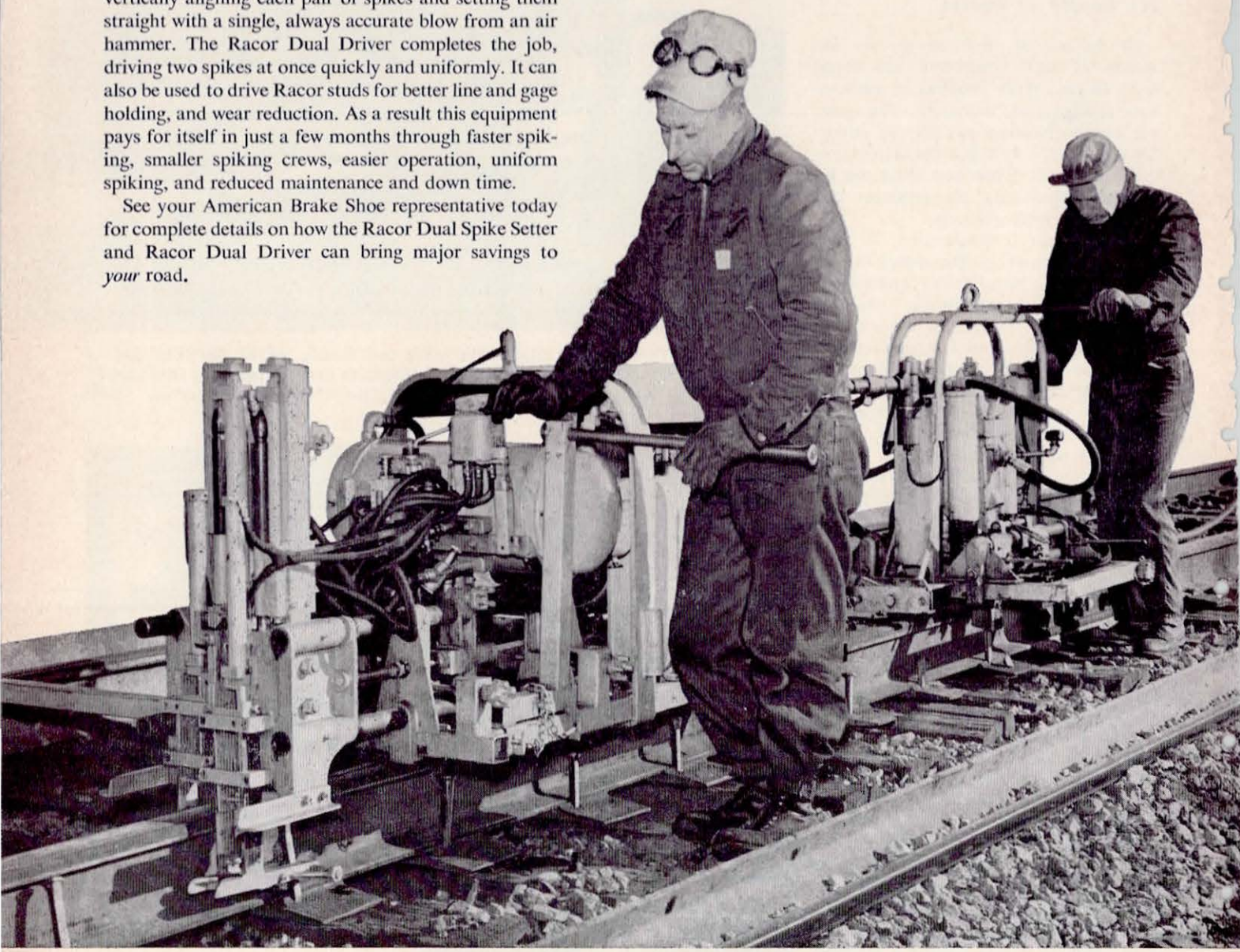
Spikes set up straight and true by the Racor Dual Spike Setter are firmly, quickly driven by this Racor Dual Driver.

This Racor Spiking Team can do the work of a dozen men

RACOR DUAL SPIKE SETTER AND RACOR DUAL DRIVER CUT COSTS, SPEED RAIL LAYING, AND IMPROVE TRACK

Once, as many as twenty-one men were required to set and drive spikes. Now nine can do the job better and faster than ever before with the new Racor Dual Spike Setter and Racor Dual Driver doing the work of twelve men. Just one or two men are required to position spikes ahead of the Racor Dual Spike Setter which moves in, vertically aligning each pair of spikes and setting them straight with a single, always accurate blow from an air hammer. The Racor Dual Driver completes the job, driving two spikes at once quickly and uniformly. It can also be used to drive Racor studs for better line and gage holding, and wear reduction. As a result this equipment pays for itself in just a few months through faster spiking, smaller spiking crews, easier operation, uniform spiking, and reduced maintenance and down time.

See your American Brake Shoe representative today for complete details on how the Racor Dual Spike Setter and Racor Dual Driver can bring major savings to *your* road.

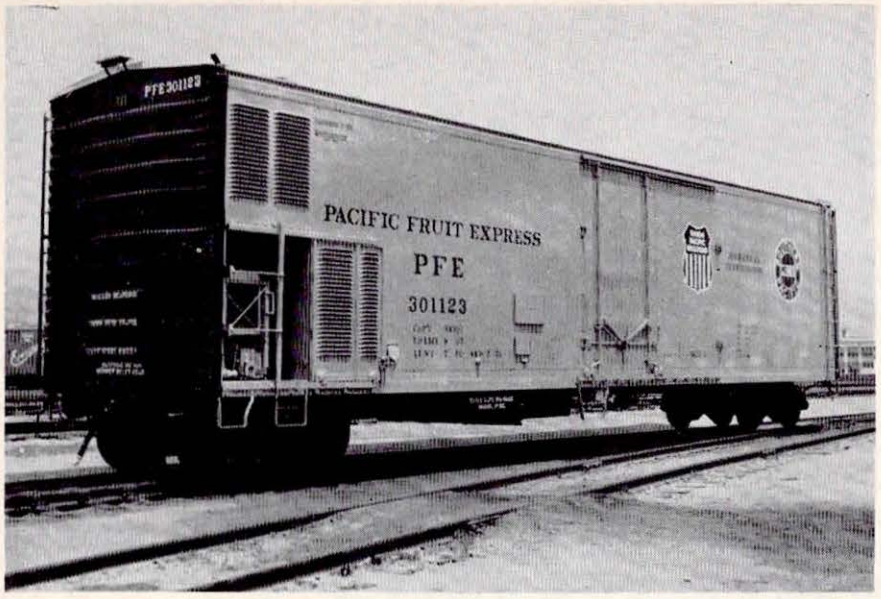


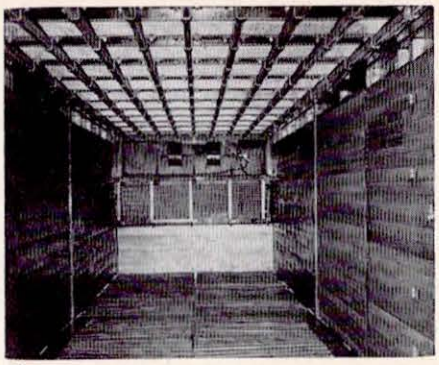
A-2994

AMERICAN Brake Shoe COMPANY

RAILROAD PRODUCTS DIVISION
530 Fifth Avenue, New York 36, N.Y.
In Canada: Dominion Brake Shoe Company, Ltd.

RPI MEMBER





BURLINGTON'S prototype car has diesel engine direct-connected unit. Hydraulic motor for fans and evaporator are shown here.

ONE OF THE FIRST new Pacific Fruit Express open-envelope cars. PFE has 1,714 cars in service, 1,025 on order.

MECHANICAL REFRIGERATOR CARS (*Continued from page 17*)

train men who inspect and service loaded cars en route. The other was for men who make all repairs on empty cars including pre-trip inspections and service at terminals. Supervisors attended training courses set up by component manufacturers. FGEX 1600 was also outfitted as an instruction car with all important refrigeration equipment.

Inspections en route are made at stations where RS cars are iced. Heavy maintenance is performed at Jacksonville and Baldwin, Fla.—which are strategically located on routes over which practically all the Florida traffic moves—and at FGE's main shop in Alexandria, Va.

PFE Has Largest Fleet

Pacific Fruit Express has the largest mechanical refrigerator car fleet operated by any company. Of the 1,714 cars in service 1,100 are equipped to carry fresh fruit and vegetables. It is converting about 40 cars each month for this purpose and will have its entire fleet changed to all-purpose cars by mid-1960. By the end of 1960 it expects to receive the 1,025 cars on order whose delivery was delayed by the steel strike. When these are delivered, it will own 2,738 cars, or more than eight times the 337 cars it operated five years ago.

To assure efficient distribution of these cars, the PFE estimates weekly loadings four weeks in advance. It then directs cars to appropriate gateways at Omaha and Kansas City via the Union Pacific, and at El Paso via the Southern Pacific. Redistribution of the cars to loading territories is made as needed.

The first PFE mechanical refrigerator cars were of envelope-type construction in which a blanket of refrigerated air was circulated through wall channels. The blanket completely surrounded but did not contact the lading. The present design opens this envelope to circulate a portion of air through the lading compartment. Humidity control is secured by selection of correct cooling surface areas in relation to air volume and, in effect, throttling down the refrigeration output to match load requirements.

One thousand of the new 50-ft 60-ton cars now on order at Los Angeles shops will be equipped with refrigeration units capable of maintaining constant temperatures ranging from zero to 70 deg. F. for periods up to 20 days without refueling. These will be all-purpose cars requiring either cold or heat to handle commodities ranging from frozen foods to all types of fresh fruits and vegetables.

The remaining 25 cars will be 50 ft long and designed for handling commodities ranging between 32 and 70 deg. F. In other words, these are experimental cars especially adapted for fresh fruit and vegetable loads which do not need extremely low-temperature cooling equipment.

All 1,025 cars will be equipped with roller bearings and protective load dividers. Eight-foot doors will facilitate lift-truck loading and unloading. It is expected that this new equipment will provide greater incentive for heavier eastbound loading and also prove attractive to shippers of westbound general freight. This traffic is expected to increase mechanical car utilization and the revenue-miles per round trip so necessary to the railroads in providing a suitable return on the higher-cost equipment.

Other innovations in the new cars include such things as continuous insulation, with outside framing, and truss-type ceilings with insulation on top. Also, there will be increased air flow and distribution of air up to 50% through the lading.

The refrigeration system will operate at two speeds (on 60 and 40 cycles) to increase economy, save fuel, extend equipment life and help balance refrigeration produced to load demand by reducing speed rather than cycling the equipment on and off. It is believed that possibly 90% of loaded trip mileage will be made at low diesel engine speed with high speed available whenever needed due to high ambient temperatures, doors opened for partial unloading, etc.

New Thermostat Designed

A static-type battery charger with silicon rectifier system to charge batteries using a.c. power from the main alternator will be installed. The new mechanical-type thermostat with bulb is designed to give the sensitivity necessary for multiple-stage operation and still have the ruggedness and dependability needed for railroad service conditions.

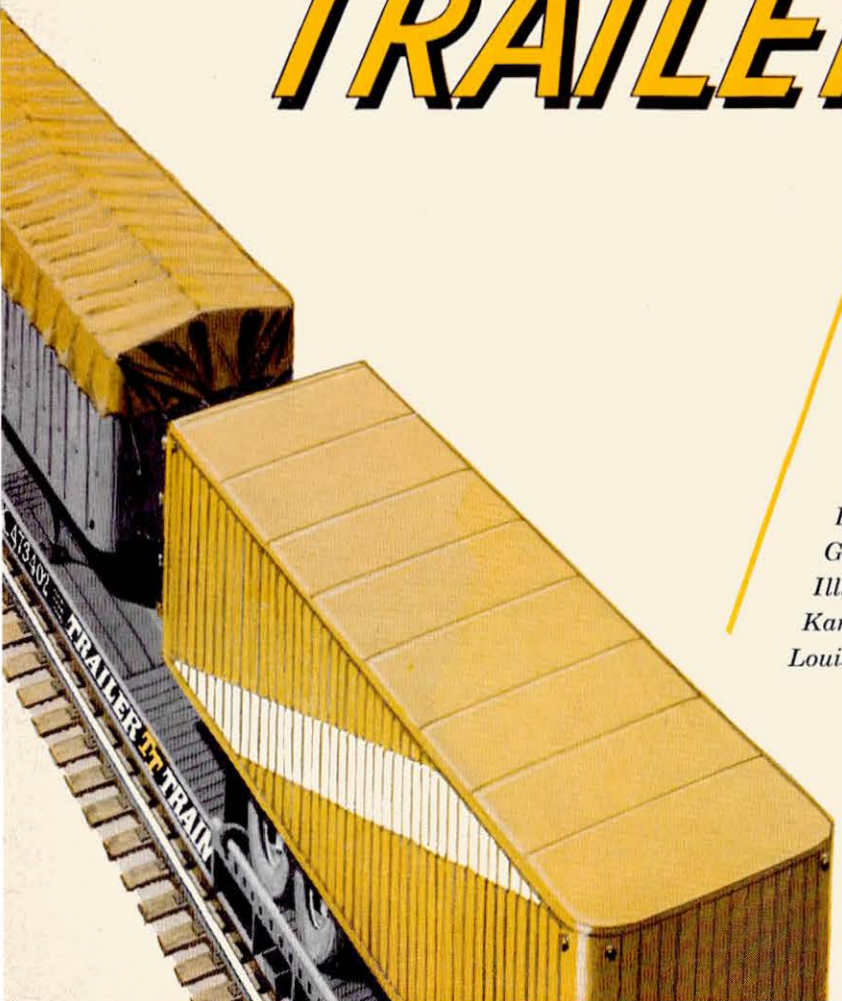
The new cars will have cast steel end

(*Continued on page 22*)

DO YOU HAVE THESE CARS WORKING ON YOUR RAILROAD?

CONSIDER THE ADVANTAGES OF

TRAILER TRAIN



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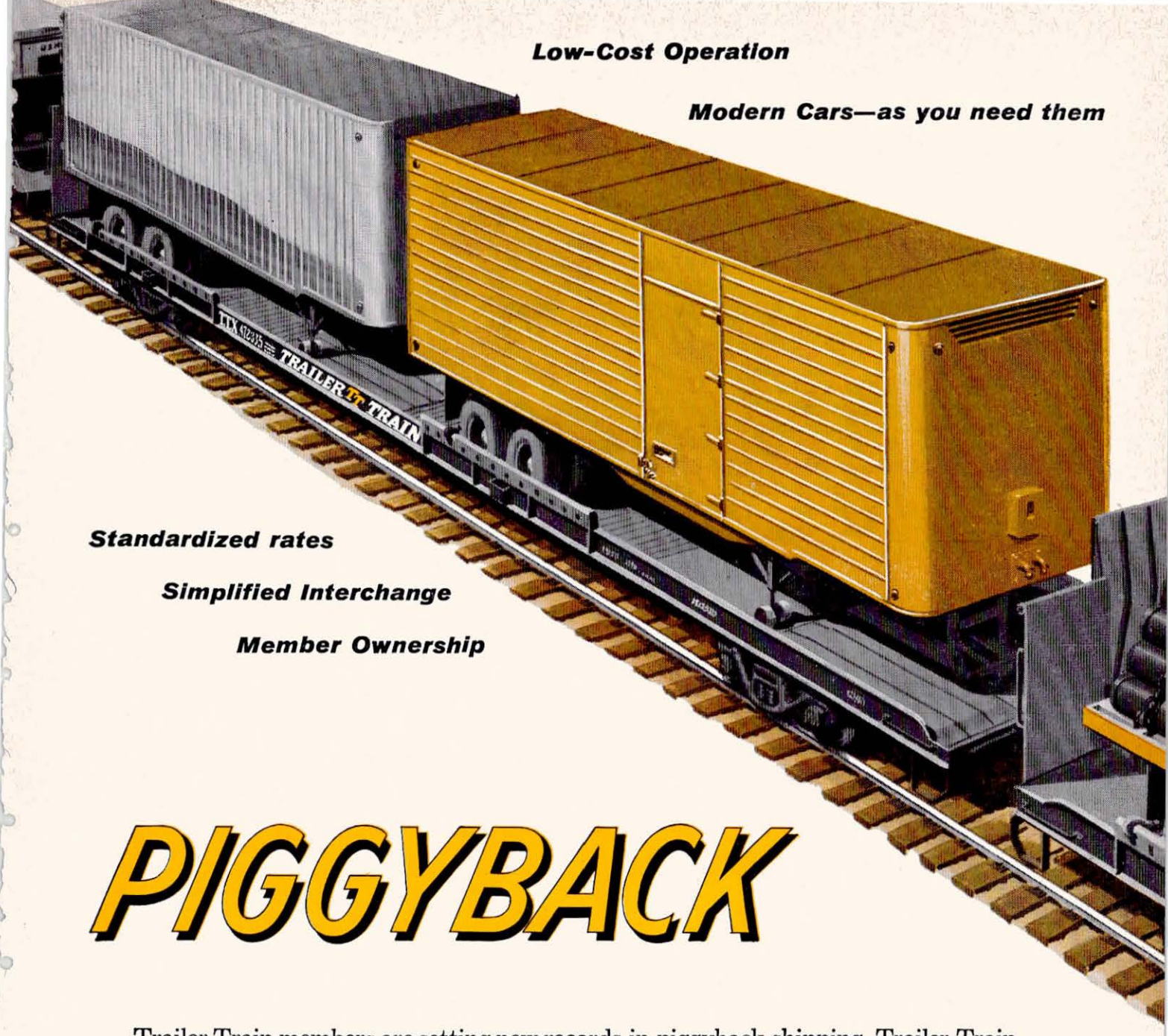
All for one—and one for all!



Low-Cost Operation

Modern Cars—as you need them

Standardized rates

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PIGGYBACK

Trailer Train members are setting new records in piggyback shipping. Trailer Train helps by providing a flexible supply of king-size cars to meet the rising, but fluctuating, demands of piggyback traffic.

Standardized on rates and equipment, Trailer Train piggyback means easy interchange, fast tie-downs, and the latest in trailer-on-flat-car design.

Because it answers a vital need, Trailer Train is growing fast—and so is piggyback for its members.

TRAILER TT TRAIN

6 Penn Center Plaza • Philadelphia 3, Pa.

MECHANICAL REFRIGERATOR CARS (*Continued from page 19*)

frames, slightly enlarged inside dimensions and floor rack height adjusted to 4 ft 6½ in., the best compromise between west coast perishable shipper loading platforms and those of eastern merchandise shippers.

Failures Go Down

The effectiveness of PFE personnel training and preventive maintenance methods is indicated by service performance records. The number of trips per power plant failure on mechanical cars increased from 8.96 in 1956 to 18.5 in 1959. Similarly, the number of trips per failure of refrigeration equipment increased from 6.82 in 1956 to 20 in 1959.

An appreciable part of the credit for this improved performance must be given to manufacturers who have developed and supplied more reliable equipment. The record has added significance because the PFE charges a failure to any unit requiring manual adjustment of any degree other than routine inspection.

The PFE knows that mechanical refrigerator car success depends on periodic maintenance supported by the necessary servicing organization and facilities. Five major repair stations are located at Roseville, Cal., Nampa, Ida., Tucson, Ariz., Pocatello, Ida., and Los Angeles, Cal. Light repairs are made at 11 points, strategically located, and servicing at all in-transit inspection stations.

Because of the demand for the limited supply, mechanical cars are expedited through shops and serviced and handled for quick turnaround. PFE believes it is easier and quicker to change out whole components and sub-assemblies rather than to consume precious car time repairing many small items.

At major repair shops, pre-trip inspection is made of all equipment. Oil checks uncover engine defects and other mal-functioning. Preventive maintenance is assured by periodic inspection, replacement or overhaul of diesel engine auxiliaries at either one- or two-year intervals, as required. All major shops are equipped with crane facilities and specialized positions, jigs and tools for complete overhaul of refrigeration system parts, diesel engines, alternators and regulators. A load bank is used to break in and test overhauled diesel engines by loading the alternator. Injector repair rooms are air conditioned for best results.

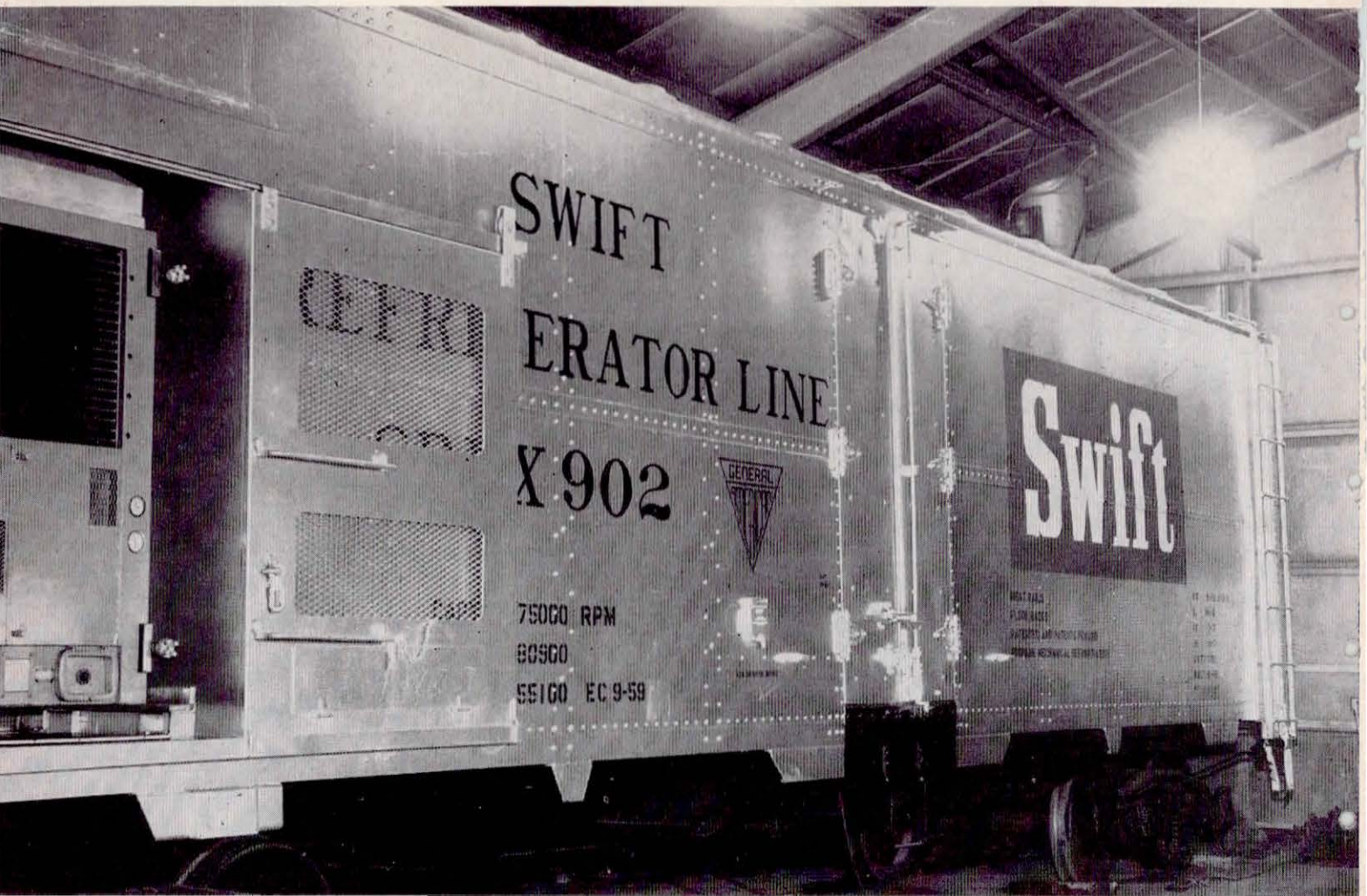
Particular attention is also paid to the specialized training of inspection and repair forces. After a "sinking in" period of individual study, a preliminary general instruction course is given by PFE personnel at local shop and inspection points. This is followed by an intensive specialized course generally conducted by manufacturers at plants where new equipment can be studied and demonstrated in operation.

New Methods Save Time

The Santa Fe has 310 mechanical refrigerator cars in service. The 200 cars to be delivered in 1960 will be equipped with load dividers. This road believes all future cars will be 50 ft long and equipped with more sensitive controls.

Pre-trip time is considerably shortened by use of special instrumentation. It formerly took about 24 hours to

MEAT-HANDLING CAR below has General American propane refrigeration equipment built by Thermo-King.



make inspection in bringing car temperature down to minus 10 deg. The time is now about two hours. A test box, developed by the AT&SF, has a group of calibrated resistances with each resistor representing a fixed temperature, such as 60, 40, 28, to minus 10 deg. The box is connected to sensing element leads on the panel. Each type of control should have a special test box because, for example, Vapor test equipment can not be used on Minneapolis-Honeywell equipment.

Santa Fe's pre-trip, 4 month and 2 year inspections are based on the report of Committee 3 of the Electrical Section, AAR, as contained in the advance reports of the seventh annual meeting in June 1959 (pp. 39-43). These have been approved but are not yet in manual form.

Bakersfield has one track for major work, with two tracks in operation. All facilities are at track except for fueling, which is done on one track with leads from overhead lines. Two shops do compressor overhaul: Topeka and San Bernardino. Topeka has a test rack that can simulate any load condition on a car and allows capacity controls (unloading feature) to be set on the test bench.

The General American Transportation Corporation has five cars converted to RPM service equipped with gasoline engines converted to propane with spark ignition. The cars are economical in first cost, as well as in operating cost. Propane operation is quiet, cheaper than other fuels, and shows very little carbon deposits, according to GATC. The cars are designed for heating as well as cooling, and primarily carry shipments of packinghouse products. Meat packers with loads of 30,000 lb or less like the 40-ft car.

Cars Should Cost Less

GATC believes cars built for the future should be cheaper, the refrigeration equipment more refined and compact. The cars should have better overall operation for extended periods with a minimum of maintenance. GATC believes the propane application to the larger 50-ft all purpose cars could easily meet the designated temperature requirements of shippers.

Servicing requirements of propane cars will be relatively low. Pre-trip inspections include check of oil level, refill fuel tanks, start engine—check pressures, calibrate thermostats, and run long enough to go through the defrost cycle.

Commodities Loaded In Mechanical Refrigerator Cars

FROZEN

- Apples
- Bakery products
- Banana puree
- Berries
- Cherries
- Chocolate eclairs
- Citrus concentrate
- Clams
- Crab meat
- Eggs
- Fish
- Fish sticks
- Frog legs
- Fruit juices
- Glands
- Grape concentrate
- Gravy — Giblet
- Ice cream
- Lemonade
- Lobster tails
- Malted milk concentrate
- Meat
- Milk
- Melon balls
- Peaches
- Pies — Beef and chicken
- Pimentos
- Pineapple
- Plums
- Potatoes — French fried
- Potatoes — Sweet
- Poultry
- Scallops
- Shrimp
- Soup
- Tomato juice
- Turkeys — Stuffed
- Turtle meat
- TV dinners
- Vegetables
- Waffles
- Watermelon rind

NON-FROZEN

- Apples
- Apricots
- Blood plasma
- Cake flour
- Candy
- Celery
- Celery cabbage
- Cheese
- Chemicals
- Chilled citrus fruit juice
- Cranberries
- Escarole
- Evergreens
- Film
- Flower bulbs
- Fruit salad
- Grapefruit
- Green beans
- Green corn
- Hops
- Lard
- Lettuce
- Meat
- Mushroom sperm
- Oranges
- Peaches
- Pears
- Plums
- Potatoes
- Romaine
- Shrubbery
- Tangerines
- Tape — Masking, recording, Scotch
- Tomatoes
- Vegetables — Mixed

The Merchants Despatch Transportaton Corporation reports the trend is toward making all existing cars capable of handling all commodities instead of only frozen foods. However, in the future MDT believes the bulk of the cars will be designed for 30 to 70 deg temperature to handle fresh fruit, vegetables and meat.

In discussing existing cars, MDT says: "They are mostly diesel-electric, permitting use of standby service from local power source overnight or over week ends. To attain simplification and lower initial costs, direct-drive prototype cars have been built and are being tested.

(*Continued on page 24*)

MECHANICAL REFRIGERATOR CARS (*Continued from page 23*)

"In cars having false ceilings of aluminum sheet, there have been complaints of condensation forming and water dripping on the lading. Experimentation is being done with plastic sheets to reduce this objection.

According to MDT, other improvements may include hydraulic starters in place of batteries, charging generators, voltage regulators, and conventional starting motors. There is a trend toward nickel-cadmium batteries which have a 10-year life. Experimentation is going on with insulation studies with foamed-in-place polyurethane insulation. Cars may be built with side posts on the exterior of the car to provide better insulation application. Lading dividers will be installed in mechanical refrigerator cars.

In converting RS cars in the interim period between all-ice and all-mechanical cars, MDT points out certain disadvantages of undercar equipment. These are: (a) accumulation of dirt and dust in the equipment to be serviced; (b) the air intake for diesel, propane, or gasoline engines being too close to the road bed with probable intake of more dirt and dust than in present location, causing more engine wear; (c) clearance problems because of interference with third rail, car floats and bridges, and hump yard vertical curves, and (d) underslung equipment in northern United States and Canada is not readily serviced or pulled out from under the car on suspended tracks where heavy snow conditions are encountered.

MDT cars receive pretrip inspection and attention prior to being placed at the shipper's location for loading. Periodic maintenance consists of repeating 1,000-, 5,000- and 10,000-engine-hour inspections. Presently, cars are moved to locations which can give pre-trip and periodic inspections. It is visualized that, with larger numbers of cars in operation, the pretrip oil changing, and lesser periodic inspections and maintenance may have to be done by mobile crews in and around urban areas.

The Northern Pacific acquired its first mechanical cars in 1955, now has 176 in service and 50 on order. Tests showed that the early NP car cooling systems produced less than 10 tons of refrigeration. Hour meters showed the compressors to be working 72% of the time. As a result all later cars were equipped with 10- or 15-ton systems.

Other improvements made in construction of the newer cars include the welding of roofs to seal this area and prevent air leakage and installation of double rubber seals at door openings. Consideration is also being given to the use of eight- instead of six-foot doors for easier loading.

On the Northern Pacific, flow of empty cars is westward to the Spokane, Pasco and Seattle Wash., areas where the cars are loaded and returned eastward. The NP can route the cars empty to one of these points where pre-trip preparation can be made. Experience has shown that the cars average one round trip per month.

The NP recommends that pre-trip inspection facilities include two tracks with not less than eight feet of pavement between them. Tracks should be on not less than 20-ft centers. Cars, when switched to these tracks, should be spotted with engine room doors toward pavement so the truck can have access to the engine rooms. Outlets should be installed at car length intervals for operating the refrigeration on standby power. Compressed air should also be provided for cleaning. Water is desirable but not essential. Outlets should be below pavement level so as not to interfere with operation of vehicles.

No cover should be provided over the tracks or paved runway. In conducting pre-trip inspection, actual conditions under which the cars will operate should be duplicated, which includes sun load, wind, etc.

(*Continued on page 26*)

Zero° Frozen Food: Are RRs Ready?

When the Association of Food and Drug Officials of the United States (AFDOUS) met last summer and agreed on provisions of a uniform code calling for zero-deg F handling of frozen foods, it started a sequence of events that may have significant effects on railroad freight car and piggyback equipment.

Although the new code has no legal status until it is approved by state or municipal governments, it has already been adopted in principle by several large super market chains, as well as by the semi-official AFDOUS. A number of states are now considering adopting the AFDOUS code, and others are likely to follow.

Probably the first state to put in effect a law based on the code will be Connecticut. Harold Clark, Chief of the Food Division of Connecticut's Dept. of Consumer Protection (and also president of AFDOUS) said last month that the department is planning a public hearing, probably in February, at which "it will propose a tentative set of regulations governing the control of frozen foods at all levels. These regulations undoubtedly will be based largely on the contents of the present AFDOUS Code, with perhaps some minor modifications and additions."

Main points of AFDOUS Code:

- Frozen food temperatures must be zero deg or lower at all times in the packing, warehousing, shipping and selling cycle.
- Warehouse operators shall not accept custody of a frozen food shipment if internal product temperatures exceed zero deg nor should a carrier accept such a cargo for shipment.
- Vehicles (which include freight cars, containers, piggyback vans and trucks, among others) are required to have "a combination of insulation and mechanical or other refrigeration methods or facilities capable of maintaining an air and product temperature of zero deg F, or lower, while loaded with any frozen foods" plus a device for measuring temperature inside the vehicle.
- Vehicles must be precooled to 20 deg F before loading.

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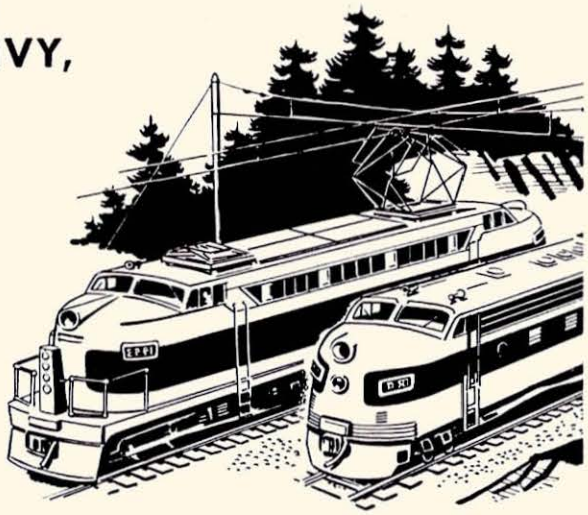

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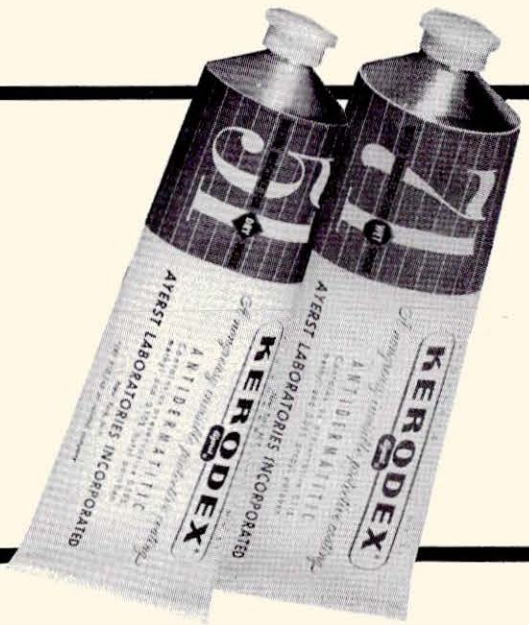
"KERODEX" spreads like a cream; acts like an invisible glove. Won't smear, and won't affect—or be affected by—materials handled. Actual tests on the job prove: "Kerodex" offers complete protection against chromates, acids, poison ivy and hundreds of other irritants.

"KERODEX" 51 FOR DRY WORK

Protects against liquid and solid irritants not soluble in water. When washed off, expansion action provides "lift" that pushes particles and irritants away from the skin.

"KERODEX" 71 FOR WET WORK

Protects against water and water-soluble irritants like diesel salts. Hands may be washed while wearing Kerodex 71 because it does not wash off but gradually wears off.



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Write for literature.

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FOR MORE EXTENSIVE TESTS IN DEPTH—A MONEY-SAVING OFFER

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QUICK DELIVERY FROM ONE OF OUR CONVENIENTLY-LOCATED WAREHOUSES! 6002

MECHANICAL REFRIGERATOR CARS (*Continued from page 24*)

After cars are released from pre-trip tracks, the NP is reasonably assured that cars will go through to destination without trouble. In handling approximately 2,700 loads in 1959, it was necessary to transfer loads on seven cars, due to mechanical trouble which could not be taken care of quickly en route. This means 99.75% of the cars went through with only minor adjustments.

The NP's study concerning cost of furnishing mechanical refrigeration services versus bunker icing services has not yet been officially completed.

However, tentative estimates indicate the cost of mechanical refrigeration services in most instances exceeds the cost of furnishing ice refrigeration.

The Chicago, Burlington & Quincy placed an experimental mechanical refrigeration car, MNX 2389, in service on April 20, 1959. It features polyurethane foam insulation and a diesel engine direct-connected compressor unit. This prototype car is being completely tested to determine its dependability and performance. In meat service, the car has nine meat rails the entire 34-ft inside length.

Tests have shown car heat leakage to be 8,336 BTU per hour at 100 deg temperature differential. In comparison, the CB&Q reports a car with conventional insulation has a leakage of 12,000 BTU per hour. The insulation, foamed-in-place, is between six and seven inches thick in the floors, sides and ends, and an average of 10-5/16 inches thick in the roof.

The direct-drive refrigeration and heating system was developed to produce a low-cost, reliable installation. Solutions had to be found to the requirements of power for air-circulating fans, heating and defrosting needs, and temperature control. How these problems were solved and the insulation developed will be the subject of a separate article in a later issue.

Coming February 22 . . .

Developments in RP Car Components

Railroading After Hours with Jim Lyne

CHAMPION RR TALKER?—They tell me that Cliff Somerville, B&M Magazine's editor, made 100 talks on various aspects of railroading before various associations and clubs during 1958-59—or just about one a week. The speaking was done outside Cliff's regular duties—under the auspices of the Railroad Community Committee of Greater Boston.

LOST PROPERTY, PARTIALLY RETURNED—My always alert informant, Southworth Lancaster of Cambridge, Mass., has passed along a translation of a story appearing in the Swedish Railways Magazine "SJ-Nytt." A farmer wrote to the station master at a large passenger terminal, asking the return of a valise he had inadvertently left on a train—the valise containing, among other items, a hymn-book and a pint of corn liquor.

The station master happened to be a fiery dry, and the idea of associating a hymn-book with a flask of corn liquor aroused his anger. He emptied the flask and returned the valise to the farmer, along wih the hymn-book and the empty bottle. The farmer wrote a thank-you note for the return of the valise, but asked: "Why did you have to drink up my corn?"

Back in the days when states in this country could be dry, but not as to interstate commerce, there was a big mail-order LCL traffic in stimulants, into dry states. And station employees were the best informed people in town as to who the thirstiest citizens were.

ORIGINAL AMERICANS ON RRs—Jean Sadler, assistant editor of C&O's "Chessie News," has sent me a copy of a report she wrote for her paper some months ago about "Chief" Alverto Curruth—a car inspector at Rougemere Yard and a full-blooded Cocopha Indian, born on a reservation at Yuma, Ariz. He started railroading for the SP in 1917 and became a boomer carman, gradually working his way eastward—winding up with the C&O in 1948.

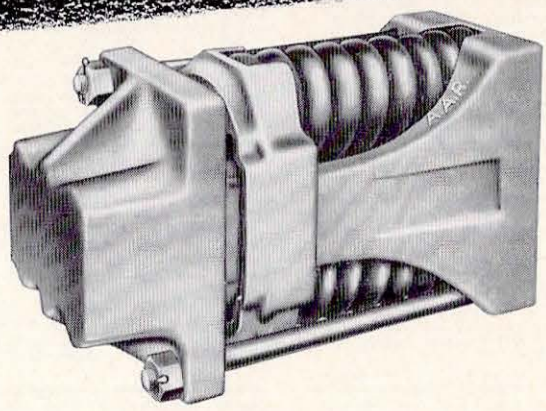
Of course, in Mexico, the population is predominantly Indian; and, consequently, that's the racial origin of most railroaders, too. But, for some reason, their representation on U.S. railroads doesn't seem to run very high.

INDIAN ENGINEERS—There are Seneca Indians in engine and train service on the B&O, on the Buffalo division, between Salamanca and Buffalo. B&O's PR Director Bill Schmidt has sent me tear sheets from a 1952 issue of the B&O Magazine, which tells all about them. There were (at that time) 8 engineers, and supervisory officers highly commended the quality of their service. In addition, there were several Indian firemen and brakemen. All of them are reported as fully modern in their education and method of living, while continuing to reside on a local reservation.

REAL PRO AT PR—One of the devoted professionals in railroad public relations passed on the other day—Roob Allie, who handled this assignment for the New York Central in the Detroit area. Roob tried to retire in 1957 after 25 years with the Michigan Railroad Association, but the urge to keep active was too much for him. He looked on his work not as merely a job, but as a crusade for justice and rationality. An old newspaper hand, he kept the regard of (and contact with) the craft; and the papers in his state printed a lot of praise of him.

Sometimes I wonder whether most railroaders realize what a highly rated group their PR people usually are. I'd doubt whether there's any other big industry whose public relations people have higher professional standing than the fellows who do this work for the railroads. You don't see or hear much about them, of course—because their job is to publicize other people, not themselves.

IMPACT PROTECTION
with NATIONAL DRAFT GEARS

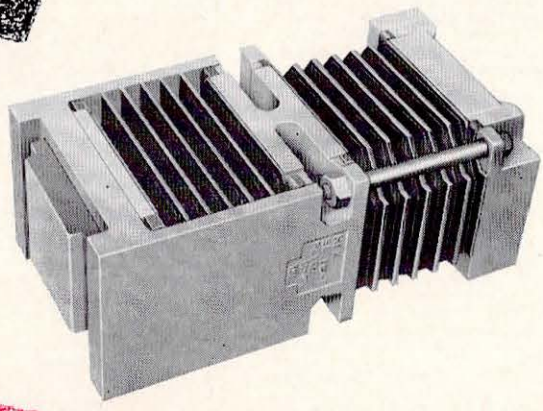


M-17A

National AAR Approved M-17A Friction Draft Gear provides lading protection in the lower range of impact speeds. Can be applied with Type E and F couplers.

MF-400

National MF-400 Rubber Draft Gear protects car structures against damage at today's high impact speeds. 65,500 foot-pound capacity in conventional 24-5/8 inch pocket reduces center sill stress as much as 42%.



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Handy Reference to Railroad Associations

AIR BRAKE ASSOCIATION — John B. Ball, 224 S. Lincoln Ave., Aurora, Ill. Annual meeting, September 12-14, Hotel Sherman, Chicago.

ALLIED RAILWAY SUPPLY ASSOCIATION.—Albert Schifflers, Jr., 80 E. Jackson Blvd., Chicago 4.

AMERICAN ASSOCIATION OF BAGGAGE TRAFFIC MANAGERS.—W. B. Paul, Seaboard Air Line, Room 408, SAL Bldg., Richmond 13, Va. Annual meeting, May 23-25, Statler Hilton Hotel, Boston.

AMERICAN ASSOCIATION OF PASSENGER TRAFFIC OFFICERS.—B. D. Branch, Hotel Manhattan, 44th St. & 8th Ave., New York. Interim business meeting, April 6-7, Statler Hotel, St. Louis.

AMERICAN ASSOCIATION OF RAILROAD SUPERINTENDENTS.—Mrs. Ruth Weggeberg, Room 835, 431 S. Dearborn St., Chicago 5. Annual meeting, June 7-9, Sheraton-Jefferson Hotel, St. Louis.

AMERICAN ASSOCIATION OF TRAVELING PASSENGER AGENTS.—R. T. Mollencott, Wabash, 1448 Railway Exchange Bldg., St. Louis 1.

AMERICAN COUNCIL OF RAILROAD WOMEN.—Mary Hurley, Chicago & Eastern Illinois, 332 S. Michigan Ave., Chicago 4. Spring meeting, March 19-20, Muehlebach Hotel, Kansas City Mo.

AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS.—N. S. Hibshman, 33 W. 39th St., New York 18. Committee on Land Transportation.—G. J. Sennhauser, Jr., Chesapeake & Ohio Ry., 1601 Terminal Tower, Cleveland.

AMERICAN RAILWAY BRIDGE AND BUILDING ASSOCIATION.—Mrs. Ruth Weggeberg, Room 835, 431 S. Dearborn St., Chicago 5. Annual meeting, September 19-21, Conrad Hilton Hotel, Chicago.

AMERICAN RAILWAY CAR INSTITUTE.—W. A. Renz, 200 E. 42nd St., New York 17.

AMERICAN RAILWAY DEVELOPMENT ASSOCIATION.—K. C. Lewis, Deleware & Hudson, Albany 1. Annual meeting, April 25-27, Hotel Monteleone, New Orleans.

AMERICAN RAILWAY ENGINEERING ASSOCIATION.—Works in cooperation with the Association of American Railroads, Engineering Division—Neal D. Howard, 59 E. Van Buren St., Chicago 5. Annual meeting, March 14-16, Hotel Sherman, Chicago.

AMERICAN RAILWAY MAGAZINE EDITORS ASSOCIATION.—F. L. Joyner, Atlantic Coast Line, Wilmington, N. C. Annual meeting, September 21-23, Olympic Hotel, Seattle.

AMERICAN SHORT LINE RAILROAD ASSOCIATION.—C. E. Huntley, 2000 Massachusetts Ave., N.W. Washington 6, D. C. Annual meeting, October 3-5, Hotel Northland, Green Bay, Wis.

AMERICAN SOCIETY FOR TESTING MATERIALS.—R. J. Painter, 1916 Race St., Philadelphia. Annual meeting, (with exhibit), June 26-July 1, Chalfonte-Haddon Hall, Atlantic City.

AMERICAN SOCIETY OF MECHANICAL ENGINEERS.—O. B. Schier, II, 29 W. 39th St., New York 18. Annual meeting November 27-December 2, Statler Hilton, New York.

Railroad Division.—C. E. Tack, American Steel Foundries, Prudential Plaza, Chicago 1.

AMERICAN WOOD-PRESERVERS' ASSOCIATION.—W. A. Penrose, 839 Seventeenth St., N.W., Washington 6, D. C. Annual meeting, April 25-27, Statler Hilton Hotel, New York.

ASSOCIATED TRAFFIC CLUBS OF AMERICA.—F. C. Day, Traffic Service Corp., 815 Washington Bldg., Washington 5, D. C. Annual meeting, September 18-21, Dinkler Plaza Hotel, Atlanta.

ASSOCIATION OF AMERICAN RAILROAD DINING CAR OFFICERS.—W. H. Berghegger, 721 Olive St., Room 300, St. Louis 1, Annual meeting, September 26-28, Hotel Kentucky, Louisville.

ASSOCIATION OF AMERICAN RAILROADS.—Richard E. Keefer, Transportation Bldg., Washington 6, D. C.

Operations and Maintenance Department.—C. D. Buford, Vice-President, Transportation Bldg., Washington 6, D. C.

Operating-Transportation Division.—A. I. Ciliske, 59 E. Van Buren St., Chicago 5.

Transportation Section.—H. A. Eaton, 59 E. Van Buren St., Chicago 5.

Operating Section.—F. J. Parker, 59 E. Van Buren St., Chicago 5.

Communications Section—A. H. Grothmann, 59 E. Van Buren St., Chicago 5. Annual Meeting, June 14-16, Sheraton-Cadillac Hotel, Detroit.

Fire Protection and Insurance Section.—W. E. Todd, 59 E. Van Buren St., Chicago 5. Annual meeting, September 27-29, Statler Hilton Hotel, Washington, D. C.

Fright Loss and Damage Prevention Section.—G. H. Ruhle, 59 E. Van Buren St., Chicago 5, Annual meeting, March 30-31, Roosevelt Hotel, New York.

Freight Station Section.—W. E. Todd, 59 E. Van Buren St., Chicago 5. Annual meeting, May 10-12, Hotel Peabody, Memphis.

Medical and Surgical Section—F. J. Parker, 59 E. Van Buren St., Chicago 5. Annual meeting, March 28-30, Hollywood Beach Hotel, Hollywood, Fla.

Protective Section—F. J. Parker, 59 E. Van Buren St., Chicago 5. Annual meeting, May 17-19, Atlanta-Biltmore Hotel, Atlanta.

Safety Section.—F. J. Parker, 59 E. Van Buren St., Chicago 5. Annual meeting, June 7-9, Chateau Frontenac, Quebec.

Electrical Section of the Engineering and Mechanical Divisions.—C. C. Elber, 59 E. Van Buren St., Chicago 5. Annual meeting, June 14-16, Jack Tar Hotel, San Francisco.

Engineering Division.—E. G. Gehrke, 59 E. Van Buren St., Chicago 5.

Construction and Maintenance Section.—Neal D. Howard, 59 E. Van Buren St., Chicago 5. Annual meeting, March 14-16, Hotel Sherman, Chicago.

Signal Section.—R. H. C. Balliet, 59 E. Van Buren St., Chicago 5. Annual meeting, October 11-13, Morrison Hotel, Chicago.

Mechanical Division.—F. H. Stremmel, 59 E. Van Buren St., Chicago 5. Annual meeting, June 14-16, Jack Tar Hotel, San Francisco.

Purchases and Stores Division.—J. H. Bean (Exec. Vice-Chairman) Transportation Bldg., Washington 6, D. C. Annual meeting June 1-3, Palmer House, Chicago.

Freight Claim Division.—R. E. O'Donnell, 59 E. Van Buren St., Chicago 5. Annual Meeting, May 3-4, Conrad Hilton Hotel, Chicago.

General Claims Division.—H. W. Hawley, 59 E. Van Buren St., Chicago 5. Annual meeting, June 15-17, Chateau Frontenac, Quebec.

Car Service Division.—R. E. Clark, Chairman, Transportation Bldg., Washington 6, D. C.

Finance, Accounting, Taxation and Valuation Department.—W. Irwin, Vice-President, Transportation Bldg., Washington 6, D. C.

Accounting Division.—Philip A. Lyon, Transportation Bldg., Washington 6, D. C. Annual meeting, June 13-16, Conrad Hilton Hotel, Chicago.

Treasury Division.—Philip A. Lyon, Transportation Bldg., Washington 6, D. C. Annual meeting, October 6-8, The Greenbrier, White Sulphur Springs, W. Va.

ASSOCIATION OF INTERSTATE COMMERCE COMMISSION PRACTITIONERS—Mrs. M. L. Urmey, Executive Secretary, 1112 ICC Building, Washington 25, D. C. Annual meeting, May 12-13, Hotel Baker, Dallas.

ASSOCIATION OF RAILROAD ADVERTISING MANAGERS.—A. W. Eckstein, Illinois Central, 135 E. Eleventh Pl., Chicago 5. Annual metting, May 23-25, Diplomat Hotel, Hollywood, Fla.

ASSOCIATION OF TRACK AND STRUCTURE SUPPLIERS.—C. L. Rager, Fairmont Railway Motors, 332 S. Michigan Ave., Chicago 4.

CANADIAN RAILWAY CLUB.—W. J. Cadogan, P. O. Box 162, Montreal 3, Quebec. Regular meetings, second Monday of each month, except February, June, July and August, Queen Elizabeth Hotel, Montreal, Que. Annual dinner, February 5.

CAR DEPARTMENT ASSOCIATION OF ST. LOUIS.—J. J. Murphy, 4047 Miami St., St. Louis 16. Regular meetings third Tuesday of each month except June, July and August, Hotel Pick-Melbourne.

CAR DEPARTMENT OFFICERS' ASSOCIATION.—E. W. Gebhardt, 297 Highland Ave., Elmhurst, Ill. Annual meeting, September 12-14, Hotel Sherman, Chicago.

CAR FOREMAN'S ASSOCIATION OF OMAHA, COUNCIL BLUFFS AND SOUTH OMAHA INTERCHANGE.—C. G. Poetzel, Chicago & North Western, 11th St. and Avenue J., Council Bluffs, Ia. Regular meetings, second Tuesday of each month, except July and August, Chieftain Hotel, Council Bluffs.

CAR FOREMEN'S ASSOCIATION OF CHICAGO.—A. F. Jungblut, 218 Main St., Glen Ellyn, Ill. Regular meetings, second Monday of each month except June, July and August, LaSalle Hotel.

CENTRAL RAILWAY CLUB OF BUFFALO.—J. A. Gorman, Room 17, 2nd floor, Hotel Statler Hilton, Buffalo 5. Regular meetings, second Thursday of each month except June, July and August, Hotel Statler Hilton.

CHICAGO RAILROAD DIESEL CLUB.—E. C. Fosdick, 225 Illinois Blvd., Hoffman Estates, Roselle, Ill. Regular meetings first Tuesday after first Saturday of each month except July and August, Hamilton Hotel, 5:30 p.m.

CHICAGO RAILROADS CAR ACCOUNTING OFFICERS.—J. A. Vogrin (Chairman) E. J. & E. RR., P. O. Box 1411, Joliet, Ill. Regular meetings last Wednesday of each month, except July and August, Traffic Club, Palmer House, at 12:15 p.m.

EASTERN ASSOCIATION OF CAR SERVICE OFFICERS.—C. C. Robinson, Monon RR, Lafayette, Ind.

EASTERN CAR FOREMAN'S ASSOCIATION.—F. Frey. Central of New Jersey, Room 6, Jersey City Terminal, Jersey City 2. Regular meetings second Friday of January, February, March, April, May, October and November. Railroad-Machinery Club, 30 Church St., New York. Annual outing, second Thursday in July, Race Brook Country Club. Orange, Conn.

LOCOMOTIVE MAINTENANCE OFFICERS' ASSOCIATION.—C. M. Lipscomb, 1721 Parker St., North Little Rock, Ark. Annual meeting, September 12-14, Hotel Sherman, Chicago.

MAINTENANCE OF WAY CLUB OF CHICAGO.—J. S. Kopec, CMSTP&P, Room 898, Union Station, Chicago 6. Regular meetings, October through April, Hamilton Hotel, Chicago.

METROPOLITAN MAINTENANCE OF WAY CLUB.—R. Craib, Railway Age, 30 Church St., New York 7. Meets February 25, April 28, June 2 (outing), October 27, December 8. Railroad-Machinery Club, 30 Church St. New York.

MILITARY RAILWAY SERVICE VETERANS.—F. W. Okie, Bessemer and Lake Erie, P. O. Box 536, Pittsburgh 30. Annual reunion, September 23-25, Texas Hotel, Ft. Worth.

MISSISSIPPI VALLEY MAINTENANCE OF WAY CLUB.—E. E. Brady, Wabash, 1402 Ry. Exchange Bldg., St. Louis 1. Regular meetings, second Monday of each month, September through May, Ambassador-Kingsway Hotel, St. Louis.

NATIONAL ASSOCIATION OF RAILROAD AND UTILITIES COMMISSIONERS.—R. Everette Kreeger, 5310 ICC Bldg., P. O. Box 684, Washington 4, D. C. Annual meeting, November, Las Vegas.

NATIONAL ASSOCIATION OF RAILROAD ENGINEERS OF TEST.—R. A. Bardwell (Chairman), Chicago & Eastern Illinois, Danville, Ill. Meetings, March 16-17 and Sept. 12, Hotel Sherman, Chicago.

NATIONAL ASSOCIATION OF RAILROAD TRIAL COUNSEL.—J. J. McCarthy (Exec. Dir.) Room 5635, Grand Central Terminal Bldg., New York 17. Annual meeting, September 6-8, The Greenbrier, White Sulphur Springs, W. Va.

NATIONAL ASSOCIATION OF RAILWAY BUSINESS WOMEN.—Miss Rosalie Draper, Chicago, Rock Island & Pacific, Room 900, LaSalle Street Station, Chicago. Annual meeting, May 22-28, Dinkler-Plaza Hotel, Atlanta.

NATIONAL ASSOCIATION OF SHIPPERS' ADVISORY BOARDS.—R. J. Tyler, Tube Turns & Girdler Div., Chemetron Corp., 224 E. Broadway, Louisville 1. Annual meeting, October 11-13, Nicollet Hotel, Minneapolis.

NATIONAL DEFENSE TRANSPORTATION ASSOCIATION.—Lily M. Beauchamp, 1612 K. St., N.W., Washington 6, D. C. Annual meeting, November 20-23, Roosevelt Hotel, New Orleans.

NATIONAL INDUSTRIAL TRAFFIC LEAGUE.—L. J. Dorr, Suite 909, Sheraton Bldg., 711 14th St., N.W., Washington 5, D. C. Annual meeeting, November 17-18, Commodore Hotel, New York.

NATIONAL RAILWAY APPLIANCES ASSOCIATION.—G. R. Betts, Armco Drainage & Metal Products, Inc. 3202 W. Sample St., South Bend 21, Ind.

NATIONAL SAFETY COUNCIL, RAILROAD SECTION.—G. C. Stromsoe, (vice-chairman) Atlantic Coast Line, Wilmington, N. C. Annual meeting, October 18-20, Chicago.

NEW ENGLAND RAILROAD CLUB.—William M. McCombs, 35 Lewis Wharf, Boston 10. Regular meeting, second Tuesday in October, December, February and April. Hotel Vendome. Boston, 6:30 p.m. Annual banquet second Thursday of May each year.

NEW YORK RAILROAD CLUB.—W. P. Dizard, 30 Church St., New York 7. Regular meetings, third Thursday of each month except June, July, August, September and December. Century Room, Commodore Hotel. Reception 5:30 p.m.; dinner 6:30; meeting, 7:45. Annual dinner, December 8.

NORTHWEST CARMEN'S ASSOCIATION.—N. J. Maglich, Minnesota Transfer Ry., 2085 Capp Road, St. Paul 14, Minn. Regular meetings, first Monday of each month except June, July, August, Midway Club, 1931 University Ave., St. Paul.

NORTHWEST LOCOMOTIVE ASSOCIATION.—W. N. Cox, P. O. Box 3346, St. Paul 1, Minn. Regular meetings, fourth Tuesday of January, May and September, Hotel Nicollet, Minneapolis; fourth Tuesday of March and November, Hotel St. Paul, St. Paul.

NORTHWEST MAINTENANCE OF WAY CLUB.—J. A. Messicci, 27 Milwaukee Station, Minneapolis 1. Regular meetings, fourth Thursday of each month, September through April, inclusive, except November and December which are third Thursday, Coleman's Cafe, 2239 Ford Parkway, St. Paul.

PACIFIC RAILWAY CLUB.—S. E. Byler, 121 E. Sixth St., Los Angeles 14. Meetings in alternate months in San Francisco and Los Angeles. One meeting a year at Sacramento and at Roseville.

RAILROAD PUBLIC RELATIONS ASSOCIATION.—H. H. Baetjer, Association of American Railroads, Transportation Bldg., Washington 6, D. C. Annual meeting, June 6-8, The Cloister, Sea Island, Ga.

RAILWAY CLUB OF PITTSBURGH.—G. E. Morrison, 2710 Koppers Bldg., Pittsburgh 19. Regular meetings third Thursday of each month, except June-September, incl., and December, Hotel Sherwyn. Dinner, 6:30 p.m.; meeting, 8. Annual dinner in November.

RAILWAY COMMUNICATION SUPPLIER'S ASSOCIATION.—G. A. Nelson, 30 Church St., New York 7. Exhibit at AAR Communications Section meeting, June 14-16 Sheraton-Cadillac Hotel, Detroit.

RAILWAY ELECTRICAL AND MECHANICAL SUPPLY ASSOCIATION.—L. R. Oswald, Transquip Corp., 919 N. Michigan Ave., Chicago 11. Exhibit in conjunction with meetings of AAR Mechanical Division and Electrical Section, June 13-16, Jack Tar Hotel, San Francisco.

RAILWAY FUEL AND OPERATING OFFICERS' ASSOCIATION.—L. H. Peters, New York Central, Room 1213 139 W. Van Buren St., Chicago 5. Annual meeting,

(Continued on page 34)

Real down-to-earth

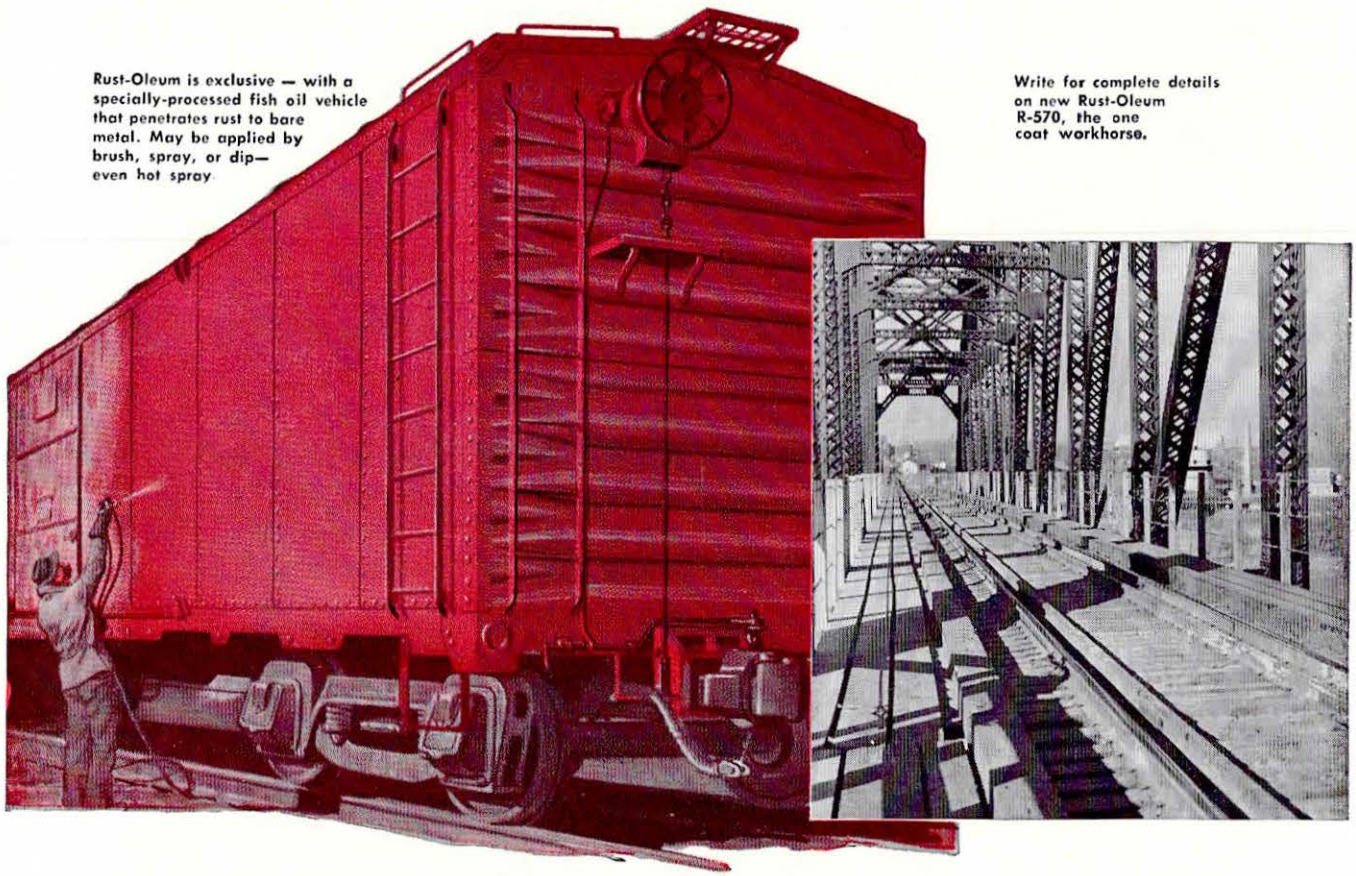
ECONOMY

Immediate Savings are yours with Rust-Oleum, because Rust-Oleum 769 Damp-Proof Red Primer may be applied directly over sound rusted surfaces after simple scraping and wirebrushing to remove rust scale and loose rust. Specially-processed fish oil vehicle *penetrates* rust to bare metal, as *proved* by leading technologists. This usually eliminates sandblasting, flame-cleaning, and other costly surface preparations, enabling one man to do the work of two or more.

Over-the-Years Economy is yours because Rust-Oleum lasts and lasts—stands up against fumes, heat, smoke, sun, moisture, steam, and weathering to provide lasting beauty on bridges, towers, tanks, rolling stock, signaling equipment, etc. Try it . . . *see for yourself* how Rust-Oleum *Stops Rust* and beautifies as it protects in many attractive railroad finishes, including red, black, gray, green, white, aluminum, blue, yellow, and many others. Attach the coupon to your letterhead and mail it today for free test sample.

Rust-Oleum is exclusive — with a specially-processed fish oil vehicle that penetrates rust to bare metal. May be applied by brush, spray, or dip—even hot spray

Write for complete details on new Rust-Oleum R-570, the one coat workhorse.



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Distinctive as your own fingerprint. Accept no substitute.

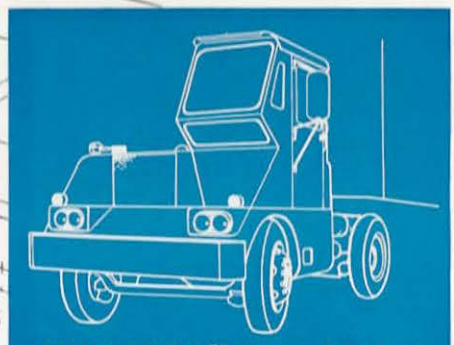
STOPS RUST!®

ATTACH TO YOUR LETTERHEAD
SEND FOR FREE TEST SAMPLE

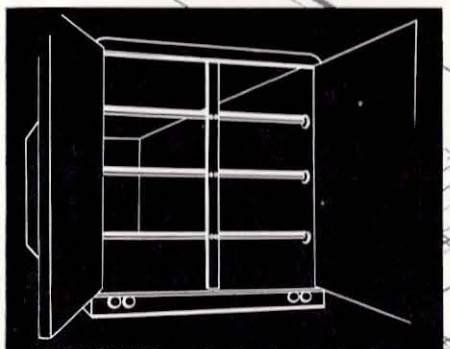
Rust-Oleum Corporation
2677 Oakton Street
Evanston, Illinois

Gentlemen: At no cost or obligation please send me a free test sample of Rust-Oleum 769 Damp-Proof Red Primer to be applied over rusted surfaces.

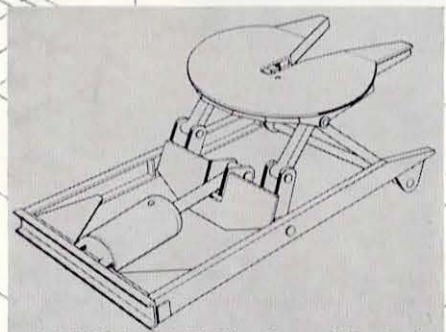
3 GIANT STEPS...



COMMANDO Rail-ER. Now available from Rail-Trailer. The new piggyback trailer handling unit developed by Ottawa Steel Division and R-T. **Offers double the performance of present equipment.**



DOOR-SAVER. A first in piggyback, a boon to the entire trucking industry . . . from Rail-Trailer. Scheduled for early '60 production, "Door-Saver" **will end trailer door damage from cargo movement!**



ASF HYDRA-LIFT*. The advanced 5th wheel by Rail-Trailer is now universally performing **more efficient piggyback carloading and trailer spotting.**

*The trademark "Hydra-Lift" is the property of American Steel Foundries.

by the "Pioneer in Piggyback"

Major advances from Rail-Trailer. When the topic is modern piggyback, you hear "Rail-Trailer" more than ever. First case in point—the widely accepted Hydra-Lift 5th Wheel that won't raise or lower accidentally. Years in development by R-T, Hydra-Lift is a significant contribution to faster and safer piggyback terminal operation.

Another giant step forward by the "Pioneer" is now in use; the new Commando Rail-ER . . . a highly specialized tractor with one mission—swift piggyback terminal trailer movement. Developed through the engineering coordination of Ottawa Steel Division and Rail-Trailer, Commando Rail-ER features torque conversion to eliminate damage from trailer slamming or jack rabbit starts. Commando Rail-ER is now universally available to piggyback from R-T.

A development of vast importance to piggyback is the R-T Door-Saver, which will make the problem of damage to doors through cargo shift a thing of the past!

These latest technological giant steps are but one facet of the ever-expanding Rail-Trailer services to the piggyback industry. When your firm contemplates the economies of piggyback, (including large-scale piggyback terminal operation), we urge that you communicate with the seasoned staff of . . .

Rail-Trailer®

221 N. LaSalle Street

Chicago 1, Illinois

MARKET OUTLOOK *at a glance*

Carloadings Rise 2.5% Above Previous Week's

Loadings of revenue freight in the week ended Jan. 30 totaled 601,900 cars, the Association of American Railroads announced on Feb. 4. This was an increase of 14,561 cars, or 2.5%, compared with the previous week; an increase of 19,444 cars, or 3.3%, compared with the corresponding week last year; and an increase of 51,368 cars, or 9.3%, compared with the equivalent 1958 week.

Loadings of revenue freight for the week ended Jan. 23 totaled 587,339 cars; the summary, compiled by the Car Service Division, AAR, follows:

REVENUE FREIGHT CAR LOADINGS
For the week ended Saturday, Jan. 23

District	1960	1959	1958
Eastern	94,161	83,576	87,027
Allegheny	112,466	96,499	100,949
Pocahontas	51,868	49,233	48,077
Southern	112,835	107,498	107,571
Northwestern	63,437	61,676	62,557
Central Western	105,076	109,994	100,679
Southwestern	47,496	47,274	44,228
Total Western Districts	216,009	218,944	207,464
Total All Roads	587,339	555,750	551,088
Commodities:			
Grain and grain products	47,011	51,256	51,506
Livestock	4,772	5,021	5,248
Coal	112,469	111,878	116,364
Coke	11,585	7,879	6,891
Forest Products	38,794	37,209	35,496
Ore	21,558	15,780	16,626
Merchandise l.c.l.	37,176	40,425	44,725
Miscellaneous	313,974	286,302	274,232
Jan. 23	587,339	555,750	551,088
Jan. 16	605,757	586,342	572,886
Jan. 9	591,515	550,666	569,807
Jan. 2	483,012	468,219	472,284
	1959	1958	1957
Dec. 26	468,752	432,148	409,598
Cumulative total, 3 weeks	1,784,611	1,692,758	1,693,781

PIGGYBACK CARLOADINGS.—U. S. piggyback loadings for the week ended Jan. 23 totaled 9,435 cars, compared with 6,383 for the corresponding 1959 week. Loadings for 1960 up to Jan 23 totaled 28,026 cars, compared with 19,031 for the corresponding period of 1959.

IN CANADA.—Carloadings for the seven-day period ended Jan. 21 totaled 67,186 cars, as compared with 66,882 for the previous seven-day period, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada		
Jan. 21, 1960	67,186	29,321
Jan. 21, 1959	68,321	26,389
Cumulative Totals		
Jan. 21, 1960	183,021	81,535
Jan. 21, 1959	185,046	73,924

New Equipment

FREIGHT-TRAIN CARS

► *Great Northern.*—Completed placement of freight car orders for 1960 program (RA, Oct. 26, 1959, p. 67). GN will acquire 250 50-ton, 50-ft plug door box cars equipped with roller bearings, and 10 85-ft flat cars from ACF; 100 open-top hopper cars and 75 covered hopper cars from Pullman-Standard; 25 mill type gondolas from Ortner; 10 steel cabooses from International Car Division, Morrison-International Corp.; and 200 insulated box cars for subsidiary Western Fruit Express from Pacific Car & Foundry (instead of from company shops as reported RA, Jan. 4, p. 31). Covered hoppers will be delivered in February; other cars are scheduled for second- and third-quarter delivery.

► *Santa Fe.*—Ordered 500 50-ton, 70-ft mechanical refrigerator cars (see p. 7).

► *Savannah & Atlanta.*—Ordered eight 53-ft 6-in., 50-ton bulkhead flat cars from Ortner Co. They will be built with cast steel underframes and interlocking upright end posts supplied by General Steel Castings Corp.

► *Seaboard Air Line.*—Ordered 800 roller-bearing hopper cars at a cost of approximately $8,600,000. Order includes 500 70-ton open-top cars, to be built by ACF at Huntington, W. Va.; 200 70-ton covered cars, to be constructed by Pullman-Standard at Butler, Pa.; and 100 90-ton hopper cars, to be built of a low-alloy high tensile steel by Magor at Clifton, N. J.

► *Southern Pacific.*—Ordered 100 R-85 85-ft piggyback flat cars from General American.

► *1959 Orders.*—Domestic orders for new freight cars reported to the American Railway Car Institute in 1959 totaled 56,494—not 62,263, as reported in the Feb. 1 issue of this magazine.

SPECIAL

► *Air Brake Division, Westinghouse Air Brake Co.*—Will supply No. 26 brake equipment and tread brake units with Cobra shoes for 116 bi-level commuter cars just ordered by Chicago & North Western (RA, Jan. 18, p. 9). Order also includes locomotive brake equipment for 42 of the cars to permit operation as push-pull lead units.

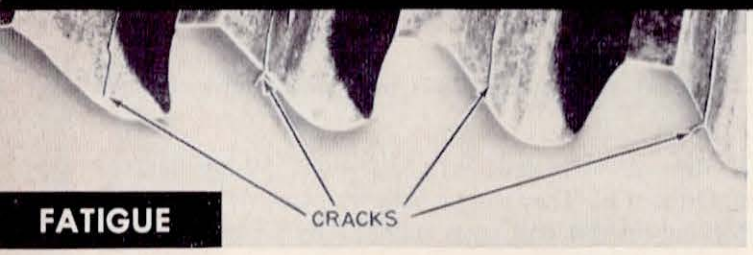
Maintenance Expenditures

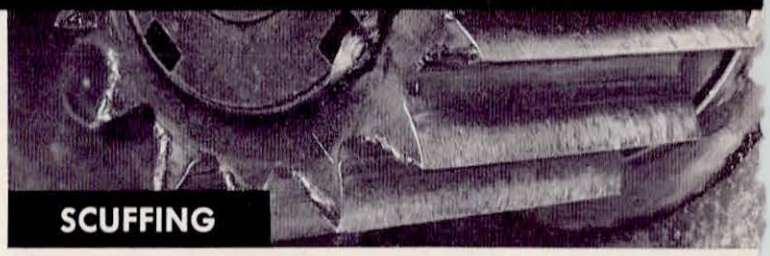
► *D&H Budgets $15,000,000 for Maintenance.*—Delaware & Hudson will spend $15,000,000 in 1960 for planned maintenance. Included in the program: complete overhaul of 50 diesel locomotives at the Colonie shops, at a cost of $1,500,000; rebuilding of 300 hopper cars at Oneonta shops, at a cost of $570,000 (with an additional 300 cars to be rebuilt if business continues to improve); heavy repairs to 810 freight cars at Oneonta; accelerated repairs to passenger equipment at Colonie; renewal of 75,000 ties; replacement of 7,000 tons of rail.

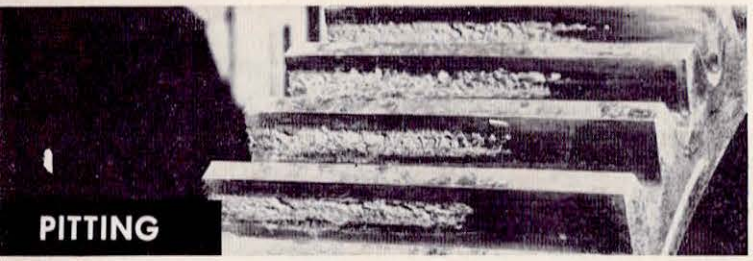
GENERAL ELECTRIC SHOWS HOW YOU CAN . . .

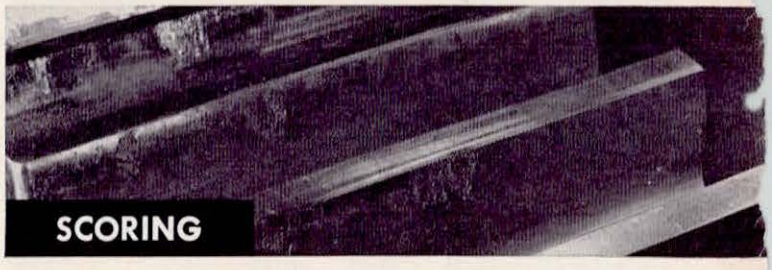
Reduce your locomotive gear maintenance costs

CHECK THESE DANGER SIGNS AND MAIL THE COUPON









FOUR DANGEROUS SYMPTOMS of gear wear can be seen above: *Metal fatigue* results from repeated and long-term load application; *pitting* results from heavy overloads and inadequate lubrication; high-temperature metal-to-metal contact through poor lubrication causes *scuffing;* tooth surfaces become *scored* by particles of foreign matter in the lubricant.

GENERAL ELECTRIC LOCOMOTIVE GEARING is as accurately constructed and thoroughly tested as the finest of machinery. Check your gears at regular intervals to prevent them from becoming a total loss—damaged beyond repair. Not only will damaged gears take your locomotive out of service for gear replacement, but defective gearing often causes traction motor failures.

That's why you can save maintenance dollars if you keep a careful watch on the involute tooth profile. When your gearing starts to show excessive deviation from profile, vibrations produced will damage your equipment. **As soon as profile deviation enters danger area shown on chart above, it's time to let G.E. save your axle gear through expert reprofiling.**

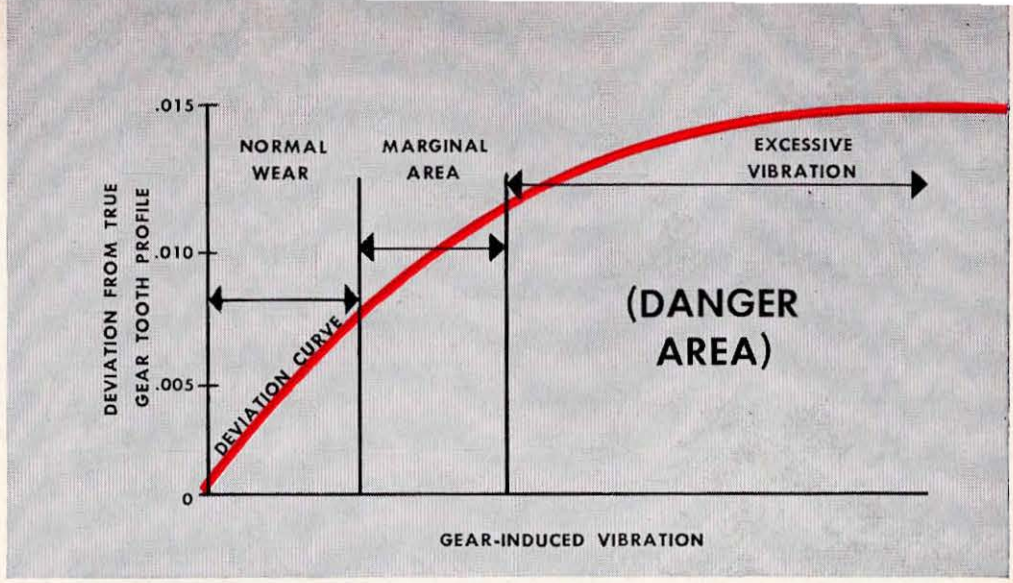
MATERIALS AND PROCESSES SPECIALLY DEVELOPED for transportation equipment are used in manufacturing your gearing. Proper heat treatment assures a tooth surface hard enough to withstand long periods of severe abrasive conditions—yet tough enough to absorb repetitive, high-impact loads. This helps reduce failures and resulting down time for your locomotive. The steel used is a forged, heat-treated carbon steel which provides a hard exterior tooth, blending gradually into a tough, softer, but more flexible core.

STRONG, DEPENDABLE GEARS AND PINIONS form the heart of the locomotive transmission system. The smooth and uniform transmission of driving power from traction motor to axle demands gearing that can stand up to the continual punishment of heavy loads

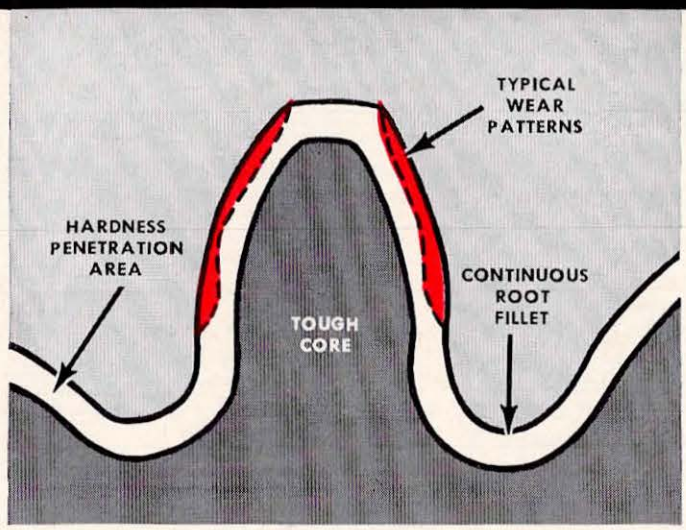
Progress Is Our Most Important Product

GENERAL ELECTRIC

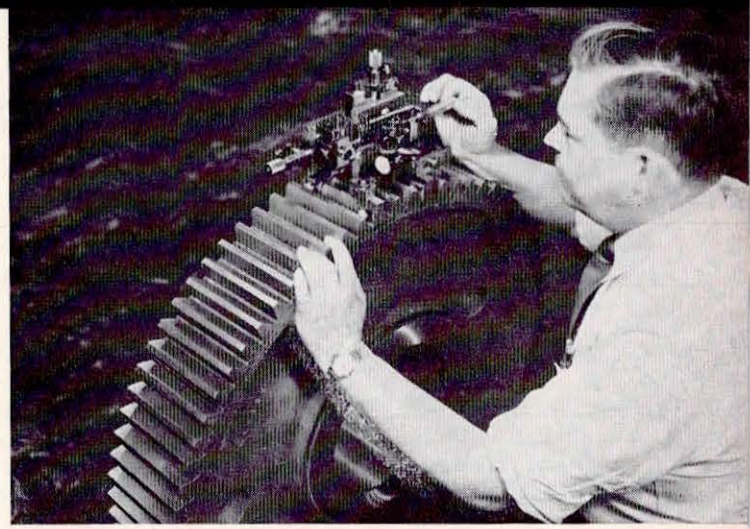
CHART AT RIGHT shows when your gears and pinons are becoming dangerously worn. If the tooth profile has deviated too far from its true configuration, there will be excessive gear-induced vibration. Prompt reprofiling will save your gearing and motor components for many more miles of productive service.



BELOW FOR MORE DETAILS ON WHEN TO RESURFACE



RED AREAS SHOW typical wear patterns on this profile view of G-E gear tooth. Hardness penetration area is a layer of extremely durable, heat-treated carbon steel. Continuous root fillet reduces tooth breakage.



FINAL CHECKS LIKE THIS ONE — using portable involute profile checker—help inspection of tooth profile accuracy.

at high speeds, often combined with sudden starts and stops. To help achieve this high level of performance, the General Electric-designed long and short addendum tooth form and continuous radius fillet provide more strength and longer life. Special protuberance hobbing techniques help to eliminate the danger of grinding cracks in the roots. Special heat-treating techniques also provide a uniform, hard overlayer of steel—containing the desirable compressive residual stresses. G.E.'s manufacturing "know-how," coupled with these advances, helps produce a longer-lived gear to handle today's heavier loads.

When you're thinking of *NEW* gearing—or resurfacing your old G-E gears—contact your nearest Railroad Regional Parts Center or Locomotive Builder. Investigate G.E.'s expert reprofiling service now—before your gears and pinions become too badly worn. General Electric Company, Locomotive and Car Equipment Department, Erie, Pennsylvania.

Section E128-67, General Electric Co.
Schenectady 5, New York

Please send me enlarged version of ready-reference Gear Maintenance Chart (showing types and causes of gear failure). I understand that I am incurring no obligation by mailing this coupon.

NAME _____

POSITION _____

COMPANY _____

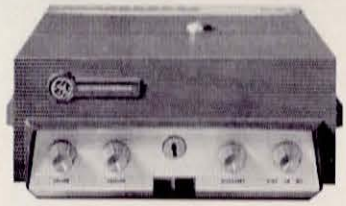
ADDRESS _____

CITY _____ STATE _____

Progress Is Our Most Important Product

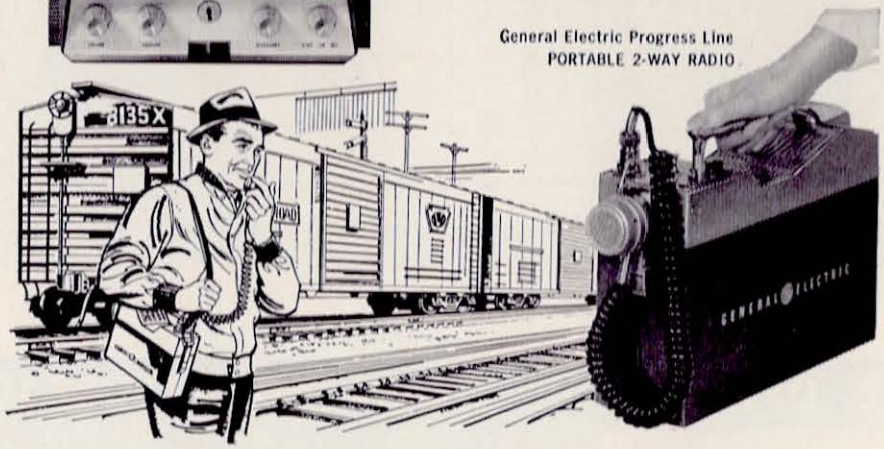
GENERAL ELECTRIC

NEW! G-E PORTABLE 2-WAY RADIOS ...from Graybar



General Electric Progress Line
MOBILE 2-WAY RADIO

General Electric Progress Line
PORTABLE 2-WAY RADIO



Here are the first 2-way radios with completely transistorized receivers!

How much can these radios do to hold down maintenance costs? What can they do to "precisionize" classification; to improve yard or right-of-way communications? How many steps can they save a railroad man in a day?... Plenty!

If, for example, you want better communications for motor vehicles in yard service, the new G-E MOBILE 2-WAY RADIO hasn't an equal. It is built to withstand the most rigorous day-in-day-out use and abuse. And it requires virtually no maintenance.

Or you may be considering equipment for car checkers. Equip the men with the new transistorized G-E PORTABLE 2-WAY RADIO and they'll always get their calls clearly; always know how to reach the next job in the shortest time.

In how many ways can you improve *your* communications with the new G-E 2-WAY RADIOS? These radios are available from Graybar nationally. So write for latest data and application ideas, or call your nearby Graybar man.

LOOK AT THE GE PRODUCT STORY

Low power drain — longer battery life — because receiver is fully transistorized. No tubes draining power when receiver is on standby.

Loud, clear signal — because sensitivity exceeds that of any other portable. You get a big 3½" self-contained speaker.

You never miss a call — because you don't have to put a handset to your ear to hear the incoming signal.

No worry about channel crowding — because the portable is available for dual frequency operation.

Real dependability — because connections are more reliable: printed circuits are plated clear through the holes.

Field servicing is easy — because "you just open it up like a book." Construction is modular. Only standard mobile test equipment is required.

Graybar carries the most complete line of modern communications equipment available from any single source. Let Graybar help with your plans.

946

call **GraybaR** *first for* Everything Electrical Graybar

ELECTRIC COMPANY, INC.

IN OVER 130 PRINCIPAL CITIES

GRAYBAR ELECTRIC COMPANY, INC., 420 LEXINGTON AVENUE, NEW YORK 17, N. Y.

RAILROAD ASSOCIATIONS

(*Continued from page 28*)

September 12-14, Hotel Sherman, Chicago.

RAILWAY PROGRESS INSTITUTE.—T. A. Nooner, Jr., First National Bank Bldg., Chicago 3. Annual meeting, November 16-17, Hotel Commodore, New York.

RAILWAY SUPPLY MANUFACTURERS' ASSOCIATION.—A. W. Brown, 527 Lexington Ave., New York 17.

RAILWAY SYSTEMS AND PROCEDURES ASSOCIATION.—G. C. Vietsch (Exec. Dir.), 433 Grand Central Station, Chicago 7. Next meeting, April 5-7, Hotel Morrison, Chicago.

RAILWAY TIE ASSOCIATION.—R. M. Hamilton, 1373 Grandview Ave., Columbus 12, O. Annual meeting, October 26-28, Statler Hilton Hotel, Cleveland.

ROADMASTERS AND MAINTENANCE OF WAY ASSOCIATION.—Mrs. Ruth Weggeberg, Room 835, 431 S. Dearbon St., Chicago 5. Annual meeting, September 19-21, Conrad Hilton Hotel, Chicago.

ST. LOUIS RAILROAD DIESEL CLUB.—F. C. Whitlock, Terminal Railroad Association of St. Louis, 376 Union Station, St. Louis 3. Regular meetings, first Monday in January, March, May and November, second Monday in September. Hotel York. Dinner, 7 p.m.; meeting, 8.

SIGNAL APPLIANCE ASSOCIATION.—G. A. Nelson, 30 Church St., New York 7. Exhibit at AAR Signal Section meeting, October 11-13, Morrison Hotel, Chicago.

SOUTHEASTERN RAILWAY CLUB.—H. W. Brewer, Seaboard Air Line, P. O. Box 6351, Jacksonville, Fla. Regular meetings, second Tuesday in February, April, June, August, October and December. Mayflower Hotel, Jacksonville.

SOUTHERN AND SOUTHWESTERN RAILWAY CLUB.—D. G. Sudderth, P. O. Box 1205, Atlanta 1. Regular meetings, 9:30 a.m. third Thursday in January, March, May, September and November (annual meeting) in Atlanta. Outing in July.

SOUTHERN ASSOCIATION OF CAR SERVICE OFFICERS.—F. I. Umhau, Southern Ry., Atlanta 3.

TORONTO RAILWAY CLUB.—W. F. Saunders P. O. Box 8, Terminal "A," Toronto 1, Ont. Regular meetings, fourth Monday of each month except February, June, July, August and December, Royal York Hotel. Annual dinner first Saturday in December.

WESTERN ASSOCIATION OF RAILWAY TAX COMMISSIONERS.—L. A. Grotewohl (President), Room 1544, 80 E. Jackson Blvd., Chicago 4. Luncheon meetings, 12:15 p.m. first Wednesday of each month, except February, July, August and September, Traffic Club, Palmer House, Chicago.

WESTERN RAILWAY CLUB.—E. E. Thulin, Suite 339, Hotel Sherman, Chicago 1. Regular meetings held in February, March, April, May, October, November and December (Ladies night).

Dividends Declared

ATLANTIC COAST LINE.—50¢, quarterly, payable March 11 to holders of record Feb. 4.

CENTRAL OF GEORGIA.—25¢, quarterly, payable March 21, June 21, Sept. 21 and Dec. 21 to holders of record March 10, June 10, Sept. 9 and Dec. 9, respectively; 5% preferred A, $1.25, quarterly, and 5% preferred B, $1.25, quarterly, both payable March 21, June 21, Sept. 21 and Dec. 21 to holders of record March 10, June 10, Sept. 9 and Dec. 9, respectively.

DOVER & ROCKAWAY.—$3, semiannual, payable April 1 to holders of record March 31.

GREAT NORTHERN.—75¢, quarterly, payable March 1 to holders of record Feb. 9.

LAKE SUPERIOR & ISHPEMING.—40¢, quarterly, payable March 15 to holders of record March 1.

LOUISVILLE & NASHVILLE.—$1.25, quarterly, payable March 11 to holders of record Feb. 1.

NEW YORK, CHICAGO & ST. LOUIS.—50¢ quarterly, payable April 1 to holders of record Feb. 26.

NORFOLK & WESTERN.—$1, quarterly, payable March 10 to holders of record Feb. 11.

PITTSBURGH, FORT WAYNE & CHICAGO.—common, $1.75, quarterly; 7% preferred, $1.75, quarterly, both payable April 1 to holders of record March 10.

READING COMPANY.—4% non-cumulative 1st preferred, 50¢, quarterly, payable March 10 to holders of record Feb. 18.

SOUTHERN.—common, 70¢, quarterly; payable March 15 to holders of record Feb. 15; 5% non-cumulative preferred, 25¢, quarterly, payable March 15, June 15 and Sept. 15 to holders of record Feb. 15, May 13 and Aug. 15, respectively.

RRs Press for Diversification

► **The Story at a Glance: The railroad industry began last week to sell its diversification or one-package-transportation program to the House Committee on Interstate and Foreign Commerce. The industry made its pitch at hearings before that committee's subcommittee on transportation and aeronautics, which is headed by Representative Williams of Mississippi.**

The program calls for repeal of those provisions of the Interstate Commerce Act and Civil Aeronautics Act which have prevented or restricted railroad operations of highway, air and water services.

The subcommittee also heard from the ICC, which took no position on the proposed legislation; and from the Department of Commerce, which favors diversification legislation but not that proposed in bills supported by the railroads. The proposed legislation is opposed by truckers and water carriers.

Three railroad presidents were among eight executives who appeared at last week's hearings to make the industry's case for diversification.

They were Wayne Johnston of the Illinois Central, A. E. Perlman of the New York Central, and Robert S. Macfarlane of the Northern Pacific. C. M. Roddewig, president of the Association of Western Railways, was scheduled to appear at last Friday's session. Chairman Williams announced that the hearings would then be in recess for an "indefinite period."

The ICC's position of neutrality was set out in a statement by its chairman, Commissioner John H. Winchell. He said the Commission felt that the issue was one "of broad Congressional policy," which should be resolved by Congress itself.

Representative Harris of Arkansas, who is chairman of the Interstate Commerce Committee, did not agree. He complained that the Commission wasn't being very helpful when it advises that Congress alone must take the initiative.

He also suggested that the Commission may now have authority to grant operating rights to bring about diversification. Mr. Winchell said that some unrestricted trucking rights had been granted to railroads, but he admitted that these were "very limited."

When Subcommittee Chairman Williams referred to Mr. Winchell's statement as one of "apparent opposition" to the diversification bills, the ICC chairman said flatly that the Commission does not oppose the proposed legislation.

The bills are H.R. 7960, 7961, 7962, 9279, 9280 and 9281. They were introduced by Representatives Rogers of Texas and Bennett of Michigan.

The Commerce Department's presentation was made by Bradley D. Nash, deputy under secretary of commerce for transportation. He expressed the department's fear that enactment of the pending bills would give "carte blanche approval of common ownership."

The department does feel, however, that the regulatory agencies have not followed a consistent pattern in common-ownership cases. Thus the department favors legislation to give regulators "appropriate standards," which would "recognize those situations where a combination of common carrier services by several forms of transportation would provide public benefits considerably in excess of the separate services under separate ownership or control."

President Johnston of the IC told the subcommittee that the government's anti-diversification policies discriminate against railroads when they seek to meet the public need for more efficient transportation service. If the restrictions were lifted, "we no longer would be out on strikes before we got up to bat," Mr. Johnston added.

He went on to say the IC operates 4,500 miles of truck routes, but "our trucking authority is so hedged around with restrictions that its utility is greatly reduced." This prevents the railroad and its customers from getting "anything like the maximum benefit from our truck operation," Mr. Johnston said.

He then referred to truckers as "quite selective in their transportation of freight" and to railroads as providers of "far greater real common carrier service." And he termed it "deplorable" that "we are not allowed to improve our operations because we might be 'too competitive'."

President Perlman of NYC said the American public is being short-changed in its freight shipping bill because of the anti-diversification policy. He explained that such restrictions, "by giving each form a monopoly in its mode of transport, greatly increase the nation's transportation bill."

Questioned by subcommittee members as to why the better way would not be more joint-rate and through-route arrangements between railroads and truckers, Mr. Perlman made this reply: "Truckers are not real common carriers. If something is unprofitable, they just don't have a truck to handle it. We're left with the bed springs and lamp shades. Let's be realistic."

Mr. Perlman also paid his respects to the Department of Commerce, saying the railroads never got any help from that source. He pointed out that the department has had mandates to promote air, water and highway transportation, and asserted it would not have done its duty under the law if it did anything to help the railroads.

Deputy Under Secretary Nash made a reply to this. He said the department has done much work on the problem of promoting transport coordination. He also recalled that President Eisenhower's Committee on Transport Policy and Organization (the so-called Cabinet Committee) was headed by former Secretary of Commerce Weeks, whom Mr. Nash heard called "secretary of railroads" after the report of the committee was issued.

Mr. Perlman then explained that he meant no reflection on the department. He was merely undertaking to point up his view that the federal government's transport policy was "lopsided"—but "without reflection on those who must administer it."

President Macfarlane of NP told how that road's subsidiary, Northern Pacific Transport Co., has operated unrestricted trucking services in Montana for 27 years—and other Montana truckers "have grown and prospered to an extent hardly paralleled in transportation history."

Like Mr. Perlman, Mr. Macfarlane disputed the claim that coordination can be obtained through joint rail-truck rates and routes. He said:

"Divided control and responsibility under these circumstances is plainly undesirable. In order to establish perfect coordination and desired flexibility of rail-truck operations, it is essential that the railroads and cooperating truck lines have a unit of interest which only common management and control can provide."

One of the most comprehensive statements of the railroad presentation was made by George L. Buland, vice president and general counsel of the Southern Pacific. The statement was along the lines of Mr. Buland's article, "Why Railroads Want to Diversify," which appeared in Railway Age of Aug. 31, 1959. Other statements were made by Frank J. Conrad, vice president—traffic, Rock Island; F. J. Melia, vice president and western general counsel, Union Pacific; Starr Thomas, general solicitor, Santa Fe; and B. R. Johnson, president and general manager, Pacific Motor Trucking Co., subsidiary of SP.

You Ought To Know...

B&M likes commuters—and has taken full-page ads in Boston and other Massachusetts newspapers to say so. The ads told B&M commuters, among other things: "You ride in the best equipment money can buy . . . You have convenient schedules . . . Your trains arrive on time . . . You save money . . . We're proud of our commuter service and want to keep on providing it. If our 15,000 commuters stay with us, we'll stay with them."

Action against "unregulated forwarders" will be pressed vigorously in 1960, according to Giles Morrow, president of the Freight Forwarders Institute. The regulated forwarders believe there is a good chance of getting either tighter enforcement of present laws or new laws to control what Mr. Morrow calls the "new species of freight forwarder" which "solicits, advertises for traffic, quotes rates, performs a complete forwarder service," but escapes regulation through a statutory loophole provided solely for private associations.

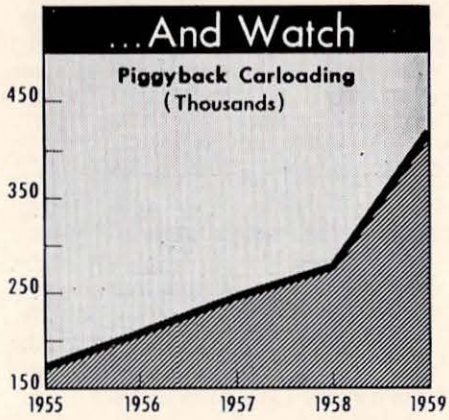
"C&O Anniversary Year" has been designated by Governor J. Lindsay Almond Jr. of Virginia. Governor Almond noted that C&O is observing in 1960 "175 years of transportation progress," and urged Virginians "to take note of this observance and of the great contribution made to the economy of the Commonwealth by our railroads."

Soo Line's last passenger service between Minneapolis-St. Paul and Sault Ste. Marie will end March 4 and 5. Limited passenger service will be continued on a part of the line, via tri-weekly mixed-train operation between Rhinelander, Wis., Gladstone and Sault Ste. Marie, Mich.

The time has come "for a reorganization of the various governmental agencies dealing with transportation . . . under a new department of government headed by a Cabinet officer," A. L. M. Wiggins, chairman of Atlantic Coast Line and the Louisville & Nashville, told the Pittsburgh Traffic Club. "Problems of unification and coordination as well as the difficulties presented in an industry that is regulated in part and unregulated in part can be served only by a unified department of government devoted to the problems of transportation," he said.

Passenger tax may be eliminated by phases—"5, 3, 2 and out"—Chairman Warren G. Magnuson of the Senate Interstate and Foreign Commerce Committee told the 25th anniversary meeting of the Transportation Association of America. At the same time, the Senator indicated little sympathy for railroad efforts to diversify into other forms of transportation.

Railroads don't want "hauls that trucks can handle more economically than we can," E. V. Hill, chairman of the Traffic Executive Association—Eastern Railroads, told the Metropolitan New York Chapter of the Association of Interstate Commerce Commission Practitioners. "But where rails are the low cost carrier," he said, "it is in our own interest and in that of the public that we make rates, if possible, to attract such tonnage to the rails . . . If our pricing follows economic principles, we should attract the traffic that we can handle most efficiently—and encourage diversion to the highway of the tonnage trucks can handle more efficiently than we can."



A net deficit of $78,592,891 was reported for the Railroad Unemployment Insurance Account as it swung into 1960. The account showed a balance of $1,916,145 as of Dec. 31, 1959, but more than $80,500,000 is owed to Railroad Retirement Account.

Not a passenger fatality in more than 11-billion passenger miles—that's the passenger safety record of Union Pacific. The total, as of Dec. 31, 1959, was 11,379,986,850 fatality-free miles.

Moving into the equipment leasing field is Hertz Corp., with a program which will stress leasing of such equipment as over-the-road trailers, interchangeable containers, mobile fork lifts and bulldozers (office equipment, production machinery, electronic and other scientific devices and machine tools will also be available). Leasing will be handled through a new subsidiary, Hertz Equipment Leasing Corp. Purchase and lease-back arrangements will be a part of the service.

Interveners in the ICC case involving the Illinois Central-Southern Pacific application for authority to acquire the John I. Hay Co., a barge line, include six other barge lines and two railroads. The latter are Chicago & North Western and Missouri - Kansas - Texas, which want to protect their interests as they may appear. The six barge lines are opposed to the proposed acquisition. They are American Commercial Barge Line, Federal Barge Lines, A. L. Mechling Co., Mississippi Valley Barge Line Co., Sioux City & New Orleans Co., and Union Barge Line.

Southern has ordered an IBM 7080 transistorized computer for its Atlanta computer center. The new machine will replace a 705 model II. Internal computing speeds of the 7080 are up to 10 times faster than that of the 705. Also Southern will have two new IBM 1401 data systems for card-to-tape conversion and high-speed printing of documents from tapes prepared by the computer. A third 1401 system will be installed at Washington, D.C., headquarters to handle corporate accounting and general management reporting.

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Transport Research by Government

To the extent that people's opinions about the propriety of government's engaging in this or that activity are based on principles—there are only two principles to choose from: (1) Either you believe government (as the only organization allowed to use force) should be limited to activities where force is undoubtedly necessary (e.g., suppressing crime, operating courts, providing for military defense)—or (2) you don't mind seeing government coercion invading all kinds of essentially peaceful pursuits (e.g., education, transportation, supply of electric power, housing).

America started out as a country with a strictly limited government—and most people seem to believe that limited government is still the dominant principle with us, but of course it isn't. The other day the newspapers reported that the government is spending a lot of the taxpayers' money to develop a ship which will operate at 60 mph. There have been expenditures running into the billions for aviation development and highway transportation. Americans are buying a lot of highway, air and water transport progress whether they want to or not.

Nothing whatever has been done by government in research and development that is helpful to railroad transportation. All technological advancement in railroading has come from research by railroads and their suppliers.

Recently, some of the big drug manufacturers have been investigated by the government—the suspicion being that the price mark-up on some of the new "wonder drugs" has been pretty high. One of these manufacturers admitted to a considerable profit margin above the bare manufacturing costs of several of his products—but this margin came down to a much more modest figure, when research and development costs were added in. And without these development costs, there would be no "wonder drugs." Technological progress comes through research—either directly by government, or by allowing private business earnings large enough to conduct large-scale research for themselves.

The least government should do for the railroads (to offset its aid to other transport) is to ease up taxes on reinvested earnings, and permit adequate depreciation charges.

Better Refrigerator Cars

A case in point—in the constant and vigorous effort of the railroads to improve their service—is set forth elsewhere in this issue, in an account of progress in the adoption of mechanical refrigeration.

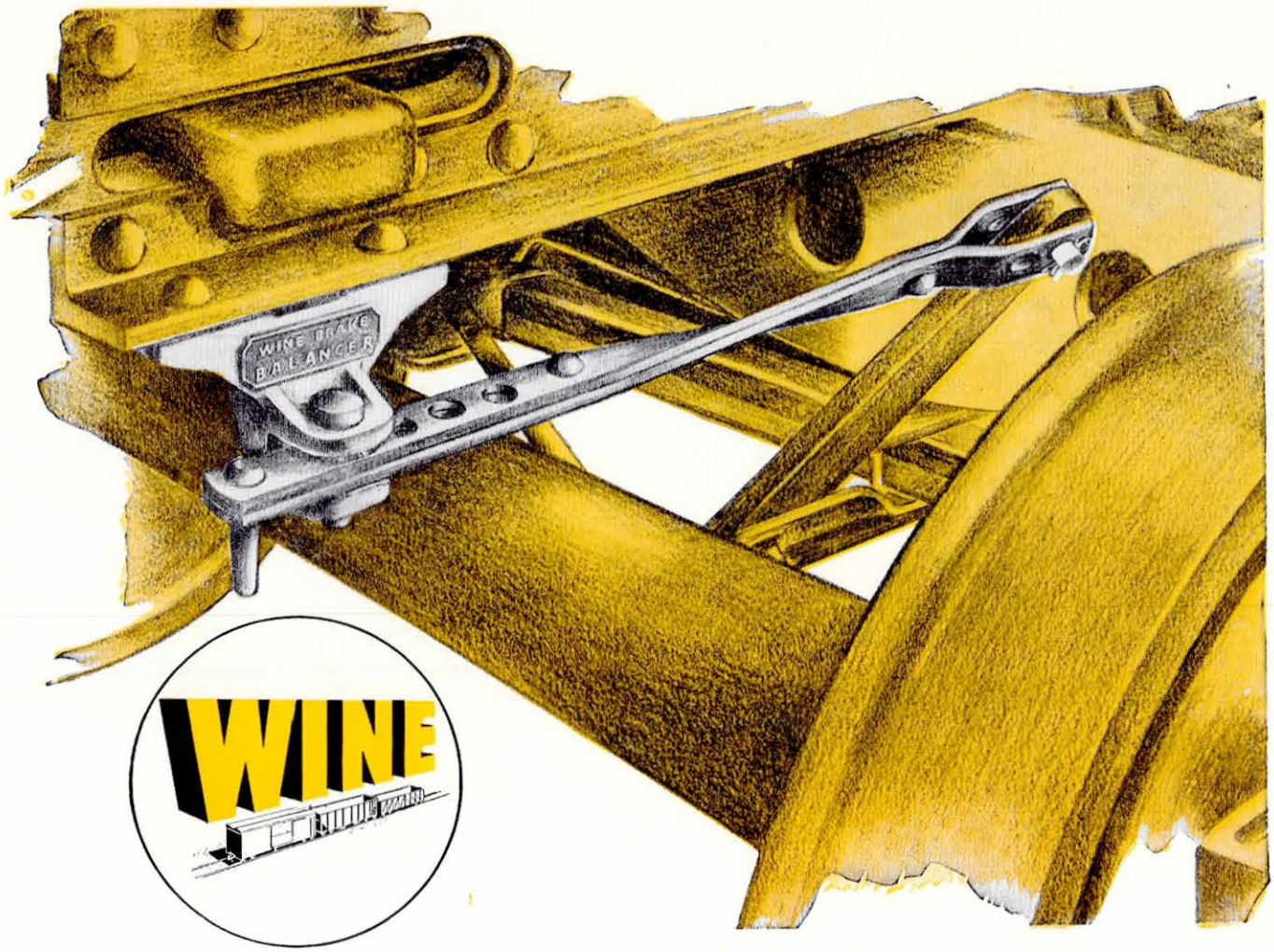
The mechanically refrigerated car has just about everything in its favor, for most traffic requiring low temperatures, as compared to the conventional ice-and-salt car. Everything, that is, except initial cost—which is upwards of $10,000 more for the mechanically equipped car. In the mechanically refrigerated car, dependably exact temperatures are easier to maintain—and some products (e.g., frozen foods) require temperatures hard to assure with water-ice refrigeration.

The mechanically equipped car requires less frequent attention (i.e., for re-icing) en route. It handles a larger pay-load—both by being larger in the first place, and by saving the space otherwise needed for ice bunkers. While the additional capital cost is considerable, there is at least some prospect that the cost difference may decrease as improvement in refrigeration advances.

But, desirable as the improved car is—in attractiveness to most shippers and in operating economy—where is $2 billion going to come from, to replace the present water-ice fleet with mechanically refrigerated cars? The improved cars will come along, no doubt, just as fast as funds can be found to provide them—but rapidity of railroad modernization, in this area as in so many others, is directly dependent on available capital.

In a strictly private business such as railroading—with no hand in the public pocket, as is the practice of most other transportation agencies—the quality of railroad service bears, necessarily, a close relationship with the degree to which political authorities will permit the railroads to achieve reasonable earnings.

EQUALIZE BRAKE FORCES..



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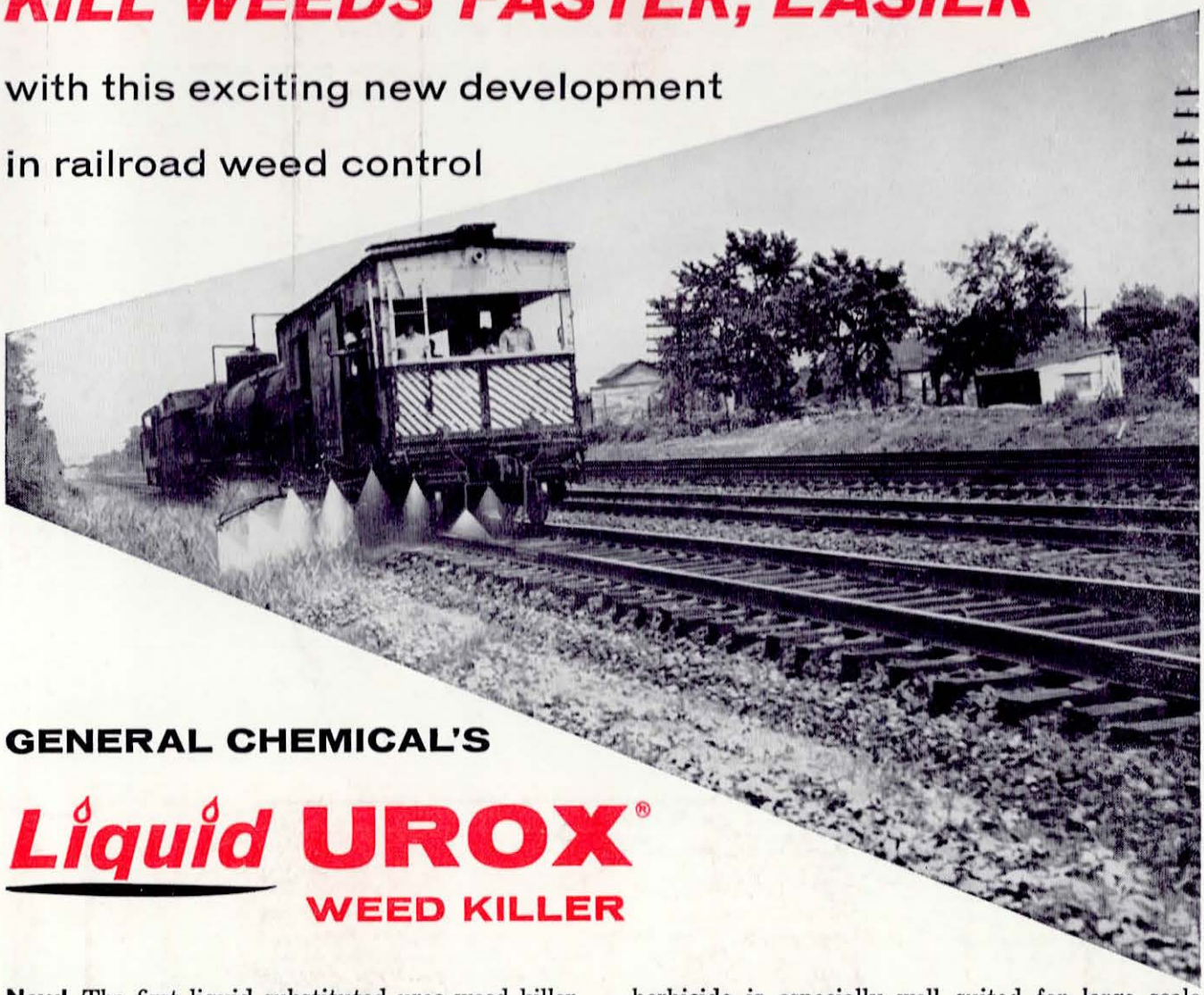

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